



# LACO ASSOCIATES

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September 1, 2005

5282.01

California Regional Water Quality Control Board  
5550 Skylane Boulevard, Suite A  
Santa Rosa, California 95403

Attention: Mr. Ron Allen

Subject: Groundwater Monitoring Report; Third Quarter 2005  
Humboldt Petroleum, Incorporated; Crescent City Shell  
1006 North Highway 101, Crescent City, California  
CRWQCB Case No. 1TDN026

Dear Mr. Allen:

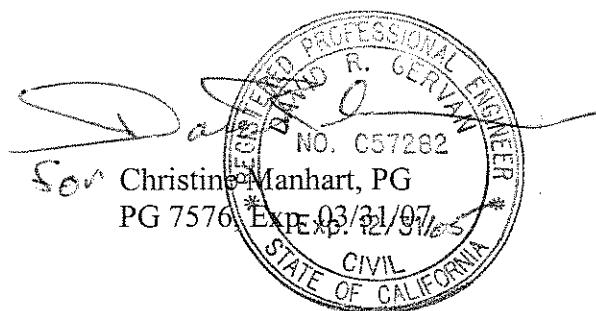
LACO ASSOCIATES (LACO) presents the results of groundwater monitoring for the third quarter of 2005 at 1006 North Highway 101, Crescent City, California. This report was prepared for Humboldt Petroleum, Incorporated in accordance with the requirements of the Pay-for-Performance agreement.

We refer you to the text of the report regarding details of this groundwater monitoring event. Please call or email if you have any questions or concerns.

Sincerely,  
LACO ASSOCIATES

Gwendolyn Erickson  
Staff Geologist

GJE:jg



Attachments

cc: Jim Seiler, HPI (electronically sent)

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# **GROUNDWATER MONITORING REPORT**

## **THIRD QUARTER 2005**

Humboldt Petroleum, Incorporated; Crescent City Shell  
1006 North Highway 101, Crescent City, California  
CRWQCB Case No. 1TDN026; LACO Project No. 5282.01

### **EXECUTIVE SUMMARY**

This report presents the results of third quarter 2005 groundwater monitoring for the Pay-for-Performance (PFP) project at the above-referenced site. On August 9, 2005, groundwater samples were collected for performance and quarterly monitoring. Contaminants of concern (COCs) include total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as diesel (TPHd). Generally, all wells continue to exhibit decreasing COC trends.

### **INTRODUCTION**

The goal of PFP is to reduce the mass of the secondary source of the COCs through injection of ozone, thereby preventing discharge of TPHg, TPHd, BTEX, and the fuel oxygenate methyl tertiary butyl ether (MTBE) to shallow groundwater. Mass reduction of the secondary source is determined using dissolved-phase concentrations from key and perimeter monitoring wells as a proxy for sorbed-phase mass. During this quarter, groundwater samples were collected from key and perimeter monitoring wells to assess dissolved-phase contaminant concentrations and trends on-site.

Please refer below to Tables A for the current groundwater monitoring regimes of the August 9, 2005, sampling event. Monitoring well sampling protocol is included in LACO's *Standard Operating Procedures*, on file at your office. A location and site map are provided as Figures 1 and 2, respectively.

MONITORING WELL ID	SCREENED INTERVAL (feet)	DTW (feet)	PURGE METHOD	WATER QUALITY PARAMETERS	ANALYTICALS	SAMPLING SCHEDULE
					ORGANICS	
MW1	5-15	6.47	DHP	pH, T, ECw, ORP, DO	TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	Quarterly
MW2	5-15	6.16			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd/mo w/ SGC	
MW3	5-15	7.12			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd/mo w/ SGC	
MW4	4-14	6.27			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
MW5	4-19	6.87			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
MW6	10-14	7.11			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
MW7	10-15	7.11			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
MW8	10-15	6.61			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd/mo w/ SGC	
OW1	5-10	7.40			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd/mo w/ SGC	
OW2	5-10	7.30			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
OW3	5-10	6.92	CAM		---	
OW4	5-10	6.84			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
OW5	5-10	6.85			TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd w/ SGC, Cr	
PZ1	5-15	7.43			---	
DW	---	6.25	DHP		TPHg, BTEX, MTBE, DIPE, ETBE, TAME, TBA, TPHd/mo w/ SGC	

A key to this table is included as Attachment 1.

Additionally, vapor samples were collected from vapor points VP1 though VP6 on August 9, 2005. Vapor samples were collected with a vacuum pump into laboratory-supplied Tedlar bags. Samples were submitted to Air Toxics Ltd. under standard chain-of-custody protocols for analysis of:

- BTEX and MTBE by Method TO-14A

## SITE CHRONOLOGY

An updated site chronology outlining sampling dates, and operation and maintenance of the ozone system is included as Attachment 2.

## **HYDRAULIC GRADIENT AND HYDROGEOLOGY**

The aquifer identified in the vicinity of the subject property primarily comprises approximately 5 feet of poorly graded sand underlain by silty sand to sandy silt. The silty sand unit extends to approximately 40 feet below ground surface (bgs) and is typical of marine terrace deposits. Based on review of the Smith River Plain Groundwater Study, marine terrace deposits at the site are likely part of the Pleistocene Battery Formation (Department of Water Resources, 1987), which is described as the principal aquifer in the Crescent City area.

Groundwater is generally found at depths between approximately 0.5 to 13.5 feet. Calculated hydraulic gradients have been fairly consistently to the northeast and southeast. The site sits between two unnamed drainages, one located approximately 1,200 feet east, and one located approximately 2,500 feet south (Figure 1). These drainages likely dominate groundwater flow direction at the site.

Based on the well screen elevations on-site, separate gradients are determined using the monitoring wells (deeper screened intervals) and observation wells (shallow screened intervals). However, because some hydraulic head elevations may be influenced by subsurface anomalies (i.e., underground storage tank [UST] cavities, trenching, ozone sparging), the hydraulic head elevations may not be dependable. In addition, hydraulic gradients can vary across the site.

The potentiometric surface for the water measured in the deep wells was contoured from hydraulic head measurements using Surfer 7.0 software and is presented on Figure 3. Monitoring wells MW2, MW3, and MW4 were used to calculate the deep hydraulic gradient by the three-point method using elevation data collected during the August 9, 2005, sampling event. The hydraulic gradient for deep aquifer during the August 9, 2005, sampling event is 1.0 percent in a S46°E direction (Figure 3).

The potentiometric surface for the water measured in the shallow wells was contoured from hydraulic head measurements using Surfer 7.0 software and is presented on Figure 4. Observation wells OW1, OW3, and OW4 were used to calculate the shallow hydraulic gradient by the three-point method using elevation data collected during the August 9, 2005, sampling event. The hydraulic gradient for shallow aquifer during the August 9, 2005, sampling event is 0.55 percent in a S57°E direction (Figure 4).

## LABORATORY RESULTS

Groundwater laboratory analytical results from the August 9, 2005, quarterly sampling event are included below in Table B. Performance monitoring sampling results are presented in Table 1. Field and laboratory intrinsic analyses are included as Table 2. Historical groundwater monitoring data is included as Table 3. Table 4 presents historical chromium analysis data. Current and historical vapor analysis data is included as Table 5. Field sampling data forms are included as Attachment 3, and copies of the current laboratory reports for this reporting period are included as Attachment 4. Charts 1 through 6 present concentration time trends in monitoring wells MW1, MW2, and MW5 through MW8.

**Table B: Analytical Results for August 9, 2005**

WELL	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
MW1	3,800	260	530	56	2.2	470	39	TAME = 44 Other oxygenates ND
MW2	330	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	260	TAME = 30 Other oxygenates ND
MW3	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND
MW4	ND<0.50	ND<50	0.75	ND<0.50	ND<0.50	ND<0.50	4.7	All oxygenates ND
MW5	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.9	All oxygenates ND
MW6	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND
MW7	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	TAME = 1.6 Other oxygenates ND
MW8	1,500	270	1.3	ND<0.50	33	8.1	ND<2.0	All oxygenates ND
OW1	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND
OW2	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND
OW3	2,800	240	3.5	6.7	24	297	40	TAME = 15 TBA = 280 Other oxygenates ND
OW4	59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND
OW5	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	23	TAME = 2.5 Other oxygenates ND
DW	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND

## DISCUSSION OF ANALYTICAL RESULTS

Groundwater results for the August 2005 quarterly sampling event generally continue to exhibit a declining trend from samples collected during this time last year. The results reported in monitoring well MW8 during this quarter remain within the same order of magnitude of concentrations reported last quarter. We speculate the sudden increase in dissolved TPHg

concentrations in monitoring well MW8 are from desorption of a proximal sorbed-phase TPHg mass.

All dissolved chromium concentrations were below detection levels, except for monitoring well MW2 (35 µg/l). The detection limit for dissolved chromium was 10 µg/l.

Vapor results to date indicate BTEX constituents on the sampled points have decreased by three to four orders of magnitude, to below detection limits, since the initiation of the *in-situ* chemical oxidation (ISCO) system. MTBE was slightly above the detection limit at vapor point VP2 (27 ppbv). The laboratory narrative indicates no receiving or analytical discrepancies during this monitoring event.

### **REMEDIATION SYSTEM OPERATION AND MAINTENANCE**

Pressure test field forms are included as Attachment 5. As of July 14, 2005, the ozone generator was operational for 12,066.84 hours. To date, ozone injection is approximately 110 kilograms.

Recently, the air compressor was significantly rebuilt. The piston, head seal, head ring seal, flapper valves, snubber, and pressure gauge were replaced. Manifold pressure has increased from an average of 24.5 pounds per square inch (psi) prior to repair, to greater than 30 psi. Damaged tubing and fittings were replaced on Stations 2 and 4 during this quarter.

### **RECOMMENDATIONS AND FUTURE WORK**

Quarterly groundwater monitoring will continue as scheduled. The next sampling event is scheduled for November 2005.

A request to utilize a mobile perozone unit to mitigate hydrocarbon ganglia remaining in two small areas on site has been submitted to the California Regional Water Quality Control Board (CRWQCB). We are currently awaiting CRWQCB approval for installation of the perozone points.

### **LIMITATIONS**

LACO ASSOCIATES has conducted the services identified herein in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing in our area under similar conditions as this project. No other warranty or representation, express or implied, is included or intended for this document.

This report is an instrument of service of LACO ASSOCIATES and was prepared for, and intended for, the exclusive use of the client. The contents of this report may not be relied upon by any other party other than the client without express written permission of LACO ASSOCIATES.

This report's findings are based on conditions that existed on the dates indicated and in the specific locations where samples were taken. The findings herein should not be relied on to precisely represent conditions at any other time or location.

## **REFERENCES**

Department of Water Resources, 1987. Smith River Plain Groundwater Study. State of California The Resources Agency Department of Water Resources Northern District, December, 1987

## **LIST OF FIGURES, TABLES, CHARTS, AND ATTACHMENTS**

- Figure 1: Location Map
- Figure 2: Site Map
- Figure 3: Deep-Hydraulic Gradient Map (8/9/05)
- Figure 4: Observation - Hydraulic Gradient Map (8/9/05)
  
- Table 1: Performance Monitoring Sampling Results
- Table 2: Intrinsic Analyses Monitoring Results
- Table 3: Groundwater Elevation Data and Groundwater Analytical Results
- Table 4: Chromium Analyses Results
- Table 5: Results of Vapor Sample Analysis
  
- Chart 1: Combined TPH, Benzene, and MTBE Concentrations in Groundwater in MW1
- Chart 2: TPHg, TPHd, Benzene, and MTBE Concentrations in Groundwater in MW2
- Chart 3: TPHg, Benzene, and MTBE Concentrations in Groundwater in MW5
- Chart 4: TPHg, TPHd, Benzene, and MTBE Concentrations in Groundwater in MW6
- Chart 5: TPHg, Benzene, and MTBE Concentrations in Groundwater in MW7
- Chart 6: TPHg and MTBE Concentrations in Groundwater in MW8

Attachment 1: Key to Abbreviations

Attachment 2: Project Chronology

Attachment 3: Field Forms

Attachment 4: Current Laboratory Reports

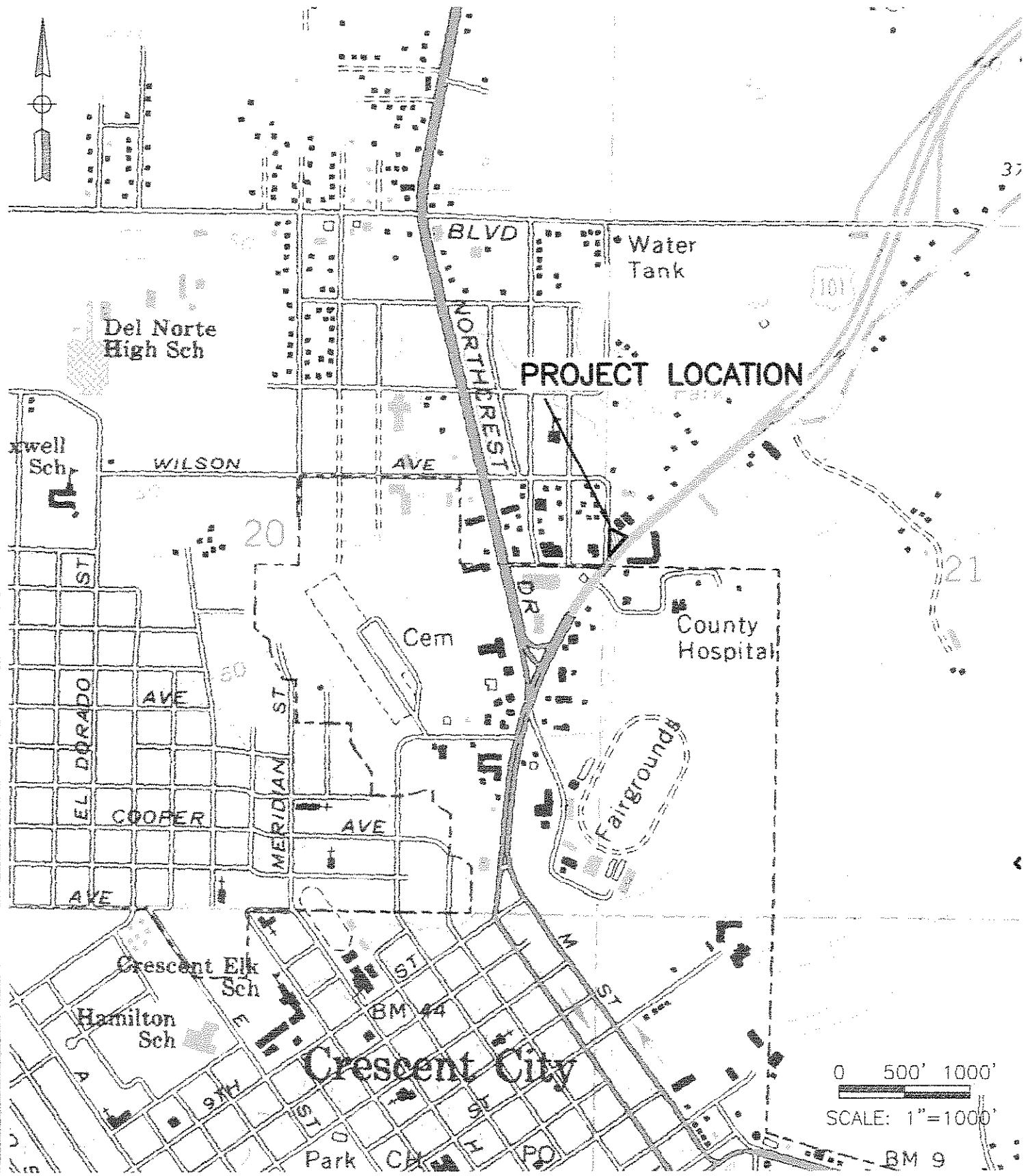
Attachment 5: Ozone System Pressure Test Field Forms



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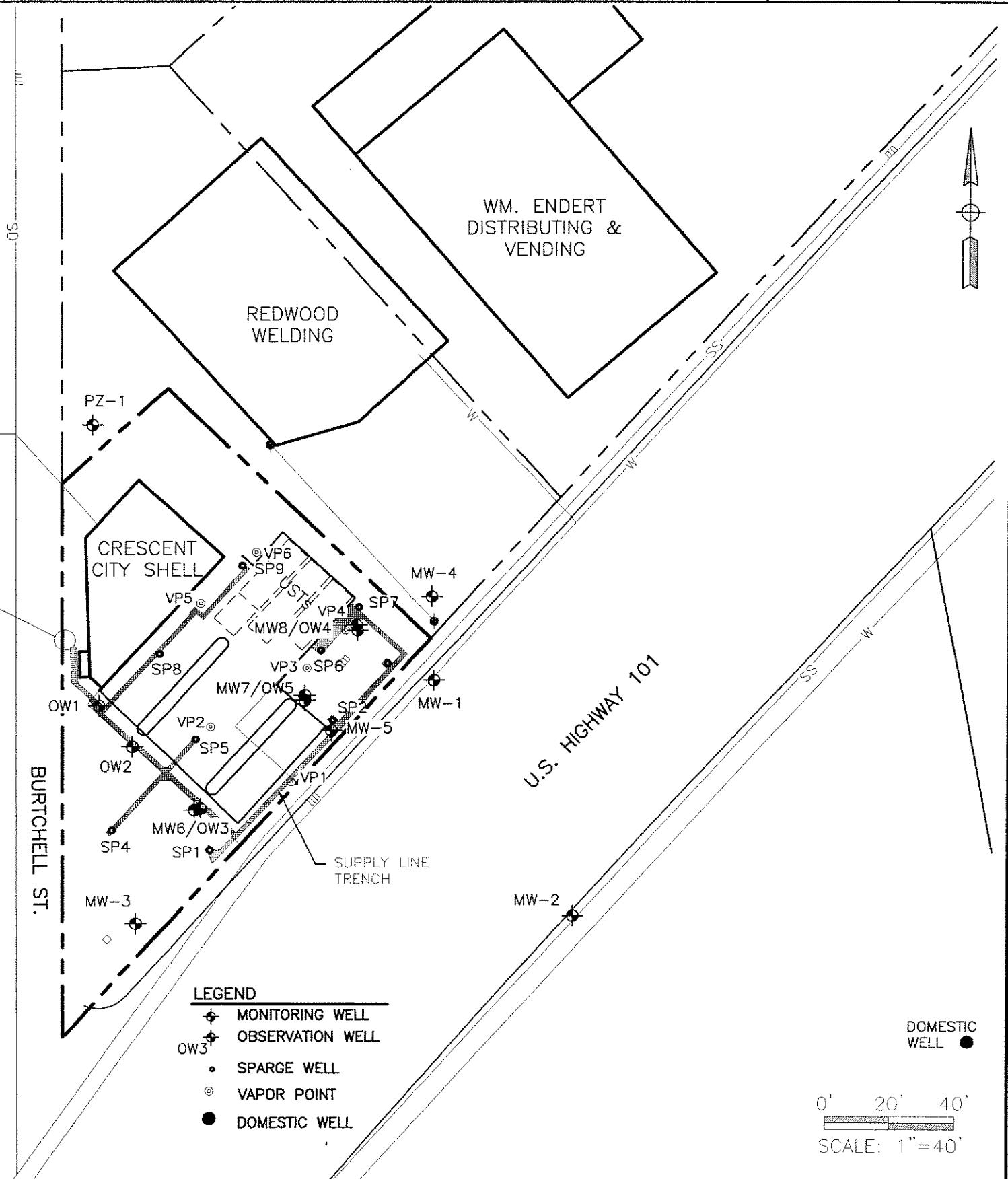
PROJECT	GROUNDWATER MONITORING REPORT	BY	RJM	FIGURE
CLIENT	HUMBOLDT PETROLEUM, INC.	DATE	8/29/05	1
LOCATION	CRESCENT CITY SHELL	CHECK		JOB NO.
LOCATION MAP			SCALE 1"=1000'	5282.01





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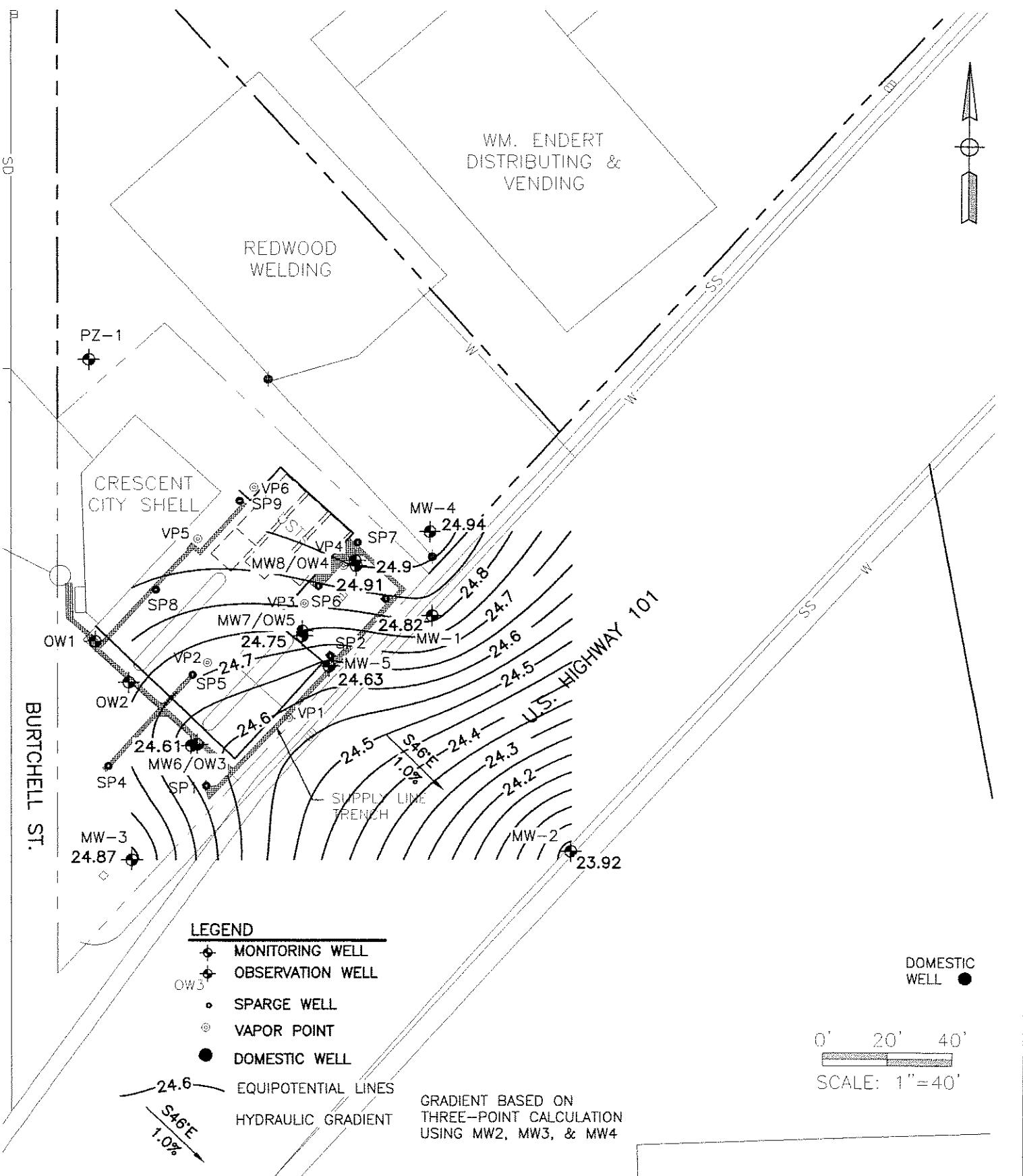
PROJECT	GROUNDWATER MONITORING REPORT	BY	RJM	FIGURE
CLIENT	HUMBOLDT PETROLEUM, INC	DATE	8/29/05	2
LOCATION	CRESCENT CITY SHELL	CHECK		JOB NO.
	SITE MAP	SCALE	1"=40'	5282.01





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PROJECT	GROUNDWATER MONITORING REPORT	BY	RJM	FIGURE
CLIENT	HUMBOLDT PETROLEUM, INC	DATE	8/29/05	3
LOCATION	CRESCENT CITY SHELL	CHECK		JOB NO.
	DEEP-HYDRAULIC GRADIENT MAP (8/09/05)	SCALE	1"=40'	5282.01





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PROJECT	GROUNDWATER MONITORING REPORT	BY	RJM	FIGURE
CLIENT	HUMBOLDT PETROLEUM, INC	DATE	8/29/05	4
LOCATION	CRESCENT CITY SHELL	CHECK		JOB NO.
	OBSERVATION-HYDRAULIC GRADIENT MAP (8/09/05)	SCALE	1"=40'	5282.01

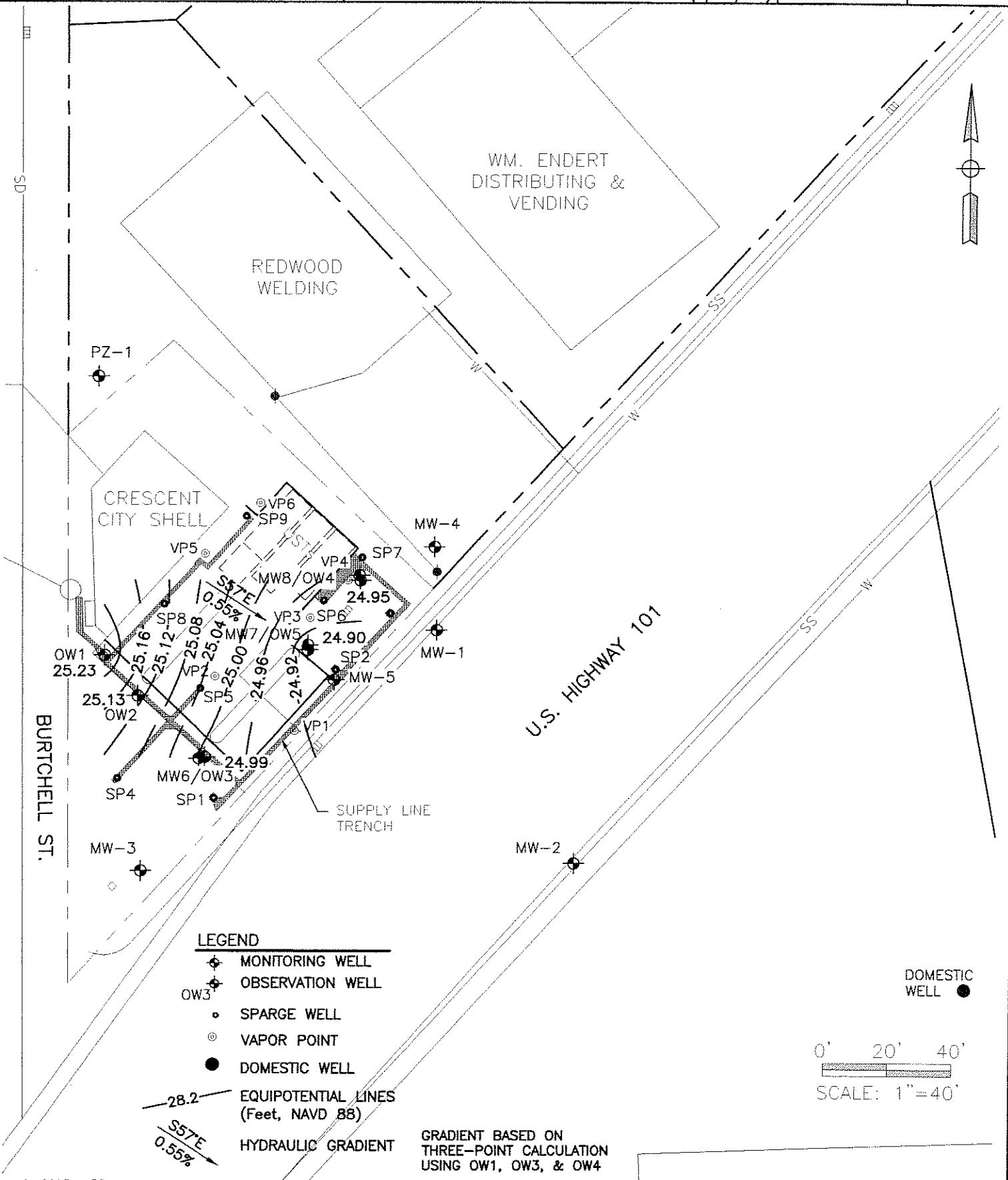


TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5232.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 11TDN026

PARGs	Date	Contaminants of Concern						Fuel Oxigenates					
		TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MIBK	TAME	TBA	ETBE	DiPE	TBF
MW-1	10/9/02- Baseline Data	11/4/02	56,000	270,000	2,700	1,200	2,900	5,280	1,200	220	220	ND<20	---
11/12/02	7,000	490	58	ND<25	ND<0.50	2.0	242	1,100	98	1,000	ND<50	ND<50	---
11/27/02	870	970	ND<0.50	ND<0.50	2.8	75	66	740	57	460	1.4	ND<1.0	ND<2.0
12/10/02	4,800	560	8.2	4.9	63	88	540	690	32	430	ND<5.0	ND<5.0	ND<2.0
12/23/02	3,100	62	11.0	8.6	1.1	1.7	18	540	43	ND<100	1.2	ND<1.0	ND<2.0
1/9/03	780	160	1.7	1.1	8.6	1.1	18	540	53	42	ND<1.0	ND<1.0	---
1/30/03	200	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	310	18	ND<20	ND<1.0	ND<1.0	ND<2.0
2/12/03	140	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	190	9.4	ND<20	ND<1.0	ND<1.0	ND<2.0
3/12/03	100	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	160	8.8	ND<20	ND<1.0	ND<1.0	ND<2.0
4/17/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	42	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
5/14/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	10	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
6/10/03	1,200	380	1.5	4.4	16	184	72	17	26	ND<1.0	ND<1.0	ND<1.0	ND<2.0
7/16/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
8/15/03	ND<50	ND<50	ND<0.50	ND<0.50	1.3	1.1	1.1	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
9/16/03	ND<50	ND<50	ND<0.50	ND<0.50	0.5	1.1	1.1	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
10/15/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
11/19/03	2,200	140	110	11	18	95	75	75	18	45	ND<1.0	ND<1.0	ND<2.0
12/11/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
1/14/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.5	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
2/9/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.9	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
3/10/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.53	1.6	ND<1.0	ND<1.0	ND<1.0	ND<2.0
4/14/04	190	50	ND<0.50	ND<0.50	0.96	10.3	4.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
5/13/04	ND<50	ND<50	ND<0.50	ND<0.50	0.64	1.4	4.3	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
6/24/04	1,300	93	120	12	11	148	59	59	31	31	ND<1.0	ND<1.0	ND<2.0
7/27/04	4,900	380	440	69	91	530	72	24	46	ND<1.0	ND<1.0	ND<1.0	ND<2.0
9/21/04	590	67	27	6.4	8.7	85	34	9.4	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0
10/19/04	570	78	40	8	13	78	27	5.2	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0
2/16/05	4,100	270	83	160	85	870	12	5.8	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0
3/15/05	1,100	68	42	15	10	198	28	8.7	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0
5/12/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
8/9/05	3,800	260	530	56	2.2	470	39	44	ND<40	ND<1.0	ND<1.0	ND<1.0	ND<2.0

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHd	Benzene	Toluene	EthyBenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DIPE	TBF
MW-2	10/9/02-	12,500	500	300	300	300	300	300	300	300	300	300	---
Baseline Data	11/4/02	2,000	90	320	0.73	ND<0.50	0.57	1,700	110	170	1.5	1.1	---
11/12/02	5,700	75	1,500	1.7	ND<0.50	5.0	3,500	240	770	3.2	ND<10	---	---
11/27/02	5,000	92	1,200	0.64	ND<0.50	2.4	3,300	200	850	3.1	ND<10	ND	ND
12/10/02	5,700	76	1,000	4.2	ND<2.5	5.3	3,100	190	600	ND<5.0	ND<5.0	ND<2.0	ND<2.0
12/23/02	430	ND<50	8.8	ND<0.50	0.61	0.82	90	4.9	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1/9/03	340	ND<50	1.3	ND<0.50	ND<0.50	ND<0.50	42	2.7	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1/30/03	470	ND<50	1.0	ND<0.50	ND<0.50	ND<0.50	0.59	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
2/12/03	580	ND<50	1.4	ND<0.50	ND<0.50	ND<0.50	0.52	2.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
3/12/03	200	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
4/17/03	200	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
5/14/03	84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
6/10/03	77	ND<50	1.1	0.66	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
7/16/03	65	ND<50	1.1	ND<0.50	ND<0.50	ND<0.50	0.6	3.9	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
8/15/03	84	ND<50	7.6	ND<0.50	ND<0.50	ND<0.50	ND<0.50	27	1.4	ND<20	ND<1.0	ND<1.0	ND<2.0
9/16/03	650	ND<50	20	ND<0.50	0.63	2.16	390	17	47	ND<1.0	ND<1.0	ND<1.0	ND<2.0
10/15/03	2,200	75	63	1.6	2.3	7.3	1,800	95	200	ND<1.0	ND<1.0	ND<1.0	ND<1.0
11/19/03	1,200	ND<50	2.3	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1,200	61	47	ND<1.0	ND<1.0	ND<1.0
12/11/03	120	ND<50	3.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	150	8.8	ND<20	ND<1.0	ND<1.0	ND<2.0
1/14/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	36	2.0	ND<20	ND<1.0	ND<1.0	ND<1.0
2/9/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	16	1.1	ND<20	ND<1.0	ND<1.0	ND<1.0
3/10/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.2	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
4/14/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	10	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
5/13/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.8	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
6/24/04	210	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	160	14	ND<10	ND<1.0	ND<1.0	ND<1.0
7/27/04	160	ND<50	6.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.13	97	6.1	ND<10	ND<1.0	ND<1.0
9/21/04	930	ND<50	94	ND<0.50	ND<0.50	0.65	620	63	68	ND<1.0	ND<1.0	ND<1.0	ND<1.0
10/19/04	680	ND<50	26	ND<0.50	ND<0.50	ND<0.50	ND<0.50	680	77	ND<10	ND<1.0	ND<1.0	ND<1.0
2/16/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	40	2.5	ND<10	ND<1.0	ND<1.0	ND<1.0
5/12/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.4	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
8/9/05	330	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	260.0	30.0	ND<10	ND<1.0	ND<1.0	ND<1.0

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1HDN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DIPE	TBF
MW-4	10/9/02-	12,500	500	500	300	300	300	300	300	35	12	ND<1.0	---
<b>Baseline Data</b>		ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	440	35	12	ND<1.0
10/9/02		ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	---
11/12/02		ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	66	3.7	ND<20	ND<1.0
11/27/02		ND<50	ND<50	1.3	ND<50	ND<50	ND<50	ND<50	ND<50	37	1.6	ND<20	ND<1.0
12/10/02		ND<50	ND<50	0.76	ND<50	ND<50	ND<50	ND<50	ND<50	13	ND<1.0	ND<20	ND<1.0
12/23/02		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	2.2	ND<1.0	ND<20	ND<1.0
1/9/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<1.0	ND<1.0	ND<20	ND<1.0
1/30/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<1.0	ND<1.0	ND<20	ND<1.0
2/12/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<1.0	ND<1.0	ND<20	ND<1.0
3/12/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	1.0	ND<1.0	ND<20	ND<1.0
4/17/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	1.7	ND<1.0	ND<20	ND<1.0
5/14/03		ND<50	ND<50	ND<0.50	ND<50	ND<50	ND<50	ND<50	ND<50	5.0	ND<1.0	ND<20	ND<1.0
6/10/03		89	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	86	1.2	ND<20	ND<1.0
7/16/03		ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	4.7	ND<1.0	ND<20	ND<1.0
8/15/03		ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	11	ND<1.0	ND<20	ND<1.0
9/16/03		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	4.1	ND<1.0	ND<20	ND<1.0
10/15/03		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0
11/19/03		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	12	ND<1.0	ND<20	ND<1.0
12/11/03		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0
1/14/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0
2/9/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0
3/10/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	1.7	ND<1.0	ND<10	ND<1.0
4/14/04		66	ND<50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<0.50	6.6	ND<1.0	ND<10	ND<1.0
5/13/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	11	ND<1.0	ND<10	ND<1.0
6/24/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	7.9	ND<1.0	ND<10	ND<1.0
7/27/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	4.4	ND<1.0	ND<10	ND<1.0
9/21/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	7.7	ND<1.0	ND<10	ND<1.0
10/19/04		ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	13	ND<1.0	ND<10	ND<1.0
2/16/05		ND<50	ND<50	ND<0.50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	2.4	ND<1.0	ND<10	ND<1.0
5/12/05		ND<50	ND<50	0.75	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.7	ND<1.0	ND<10	ND<1.0
8/9/05		ND<50	ND<50	ND<0.50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	---

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DPE	TBF
MW-5	10/9/02-	12,500	500	500	300	300	300	300	300	300	300	300	300
Baseline Data	11/4/02	9,900	120	470	ND<0.50	ND<0.50	ND<0.50	10,000	580	530	ND<20	ND<20	---
11/12/02	2,400	ND<50	4,700	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4,700	0.97	750	4.7	ND<10	---
11/27/02	2,400	ND<50	2.3	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4,800	260	610	16	ND<10	ND<10
12/10/02	2,000	ND<50	ND<2.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3,400	190	760	10	ND<5.0	ND<5.0
12/23/02	1,100	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1,600	89	140	5.6	ND<1.0	ND<5.0
1/9/03	240	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	280	8.2	22	1.8	ND<1.0	---
1/30/03	71	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	79	3.2	ND<20	ND<1.0	ND<1.0	ND<2.0
2/12/03	110	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	87	ND<1.0	ND<20	4.8	ND<1.0	ND<2.0
3/12/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<2.0	ND<2.0
4/17/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
5/14/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
6/10/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
7/16/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
8/15/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3	ND<1.0	ND<20	ND<1.0	ND<2.0
9/16/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
10/15/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
11/19/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
12/11/03	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
1/14/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
2/9/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
3/10/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
4/14/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
5/13/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
6/24/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
7/27/04	51	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0
9/21/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.2	ND<10	ND<1.0	ND<1.0	ND<2.0
10/19/04	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0
2/16/05	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	8.0	ND<1.0	ND<10	ND<1.0	ND<2.0
3/15/05	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.9	ND<1.0	ND<10	ND<1.0	ND<2.0
5/12/05	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.9	ND<1.0	ND<10	ND<1.0	ND<2.0
8/9/05	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA, Case No. 1 TDN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TEA	ETBE	DIPE	TBF
OW-3	10/9/02	59,000	—	4,200	4,100	1,900	8,100	29,000	2,800	2,200	ND<40	ND<40	—
Baseline Data													
12/23/02	4,700	51	76	96	31	320	2,600	240	ND<1000	ND<50	ND<50	ND<2.0	ND<2.0
1/9/03	2,600	120	9.9	17	9.8	150	890	94	1,500	ND<1.0	ND<1.0	ND<1.0	—
1/30/03	4,800	460	19	28	41	281	470	52	730	ND<1.0	ND<1.0	ND<2.0	ND<2.0
2/12/03	3,000	490	21	32	29	330	440	43	1,100	ND<5.0	ND<5.0	ND<2.0	ND<2.0
3/12/03	5,900	710	21	42	56	530	210	28	480	ND<1.0	ND<1.0	ND<2.0	ND<2.0
4/17/03	4,200	250	15	30	53	500	110	18	340	ND<1.0	ND<1.0	ND<2.0	ND<2.0
5/14/03	1,300	110	3.1	2.1	12	57	52	6.8	140	ND<1.0	ND<1.0	ND<2.0	ND<2.0
6/10/03	2,600	150	14	2.5	23	92	1,500	110	1,900	ND<1.0	ND<1.0	ND<2.0	ND<2.0
7/16/03	4,900	180	8.1	3.2	27	106	490	43	620	ND<1.0	ND<1.0	ND<2.0	ND<2.0
8/15/03	3,300	—	62	51.0	42	164	1,900	220	1,200	ND<1.0	ND<1.0	ND<2.0	ND<2.0
9/16/03	4,600	—	130	140	50	233	1,200	190	440	ND<1.0	ND<1.0	ND<2.0	ND<2.0
10/15/03	3,600	—	69	85	17	158	720	230	260	ND<1.0	ND<1.0	ND<2.0	ND<2.0
11/19/03	2,700	—	27	39	10	90	530	75	170	ND<1.0	ND<1.0	ND<2.0	ND<2.0
12/11/03	3,600	180	49	160	39	272	ND<150	30	57	ND<1.0	ND<1.0	ND<2.0	ND<2.0
1/14/04	4,300	160	35	160	66	540	48	18	ND<70	ND<1.0	ND<1.0	ND<2.0	ND<2.0
2/9/04	3,700	160	7	25	18	200	61	14	250	ND<1.0	ND<1.0	ND<2.0	ND<2.0
3/10/04	2,100	93	3.7	18	12	127	28	6.7	50	ND<1.0	ND<1.0	ND<2.0	ND<2.0
4/14/04	4,300	150	18	52	45	300	96	29	120	ND<1.0	ND<1.0	ND<2.0	ND<2.0
5/13/04	3,200	190	11	39	36	269	62	17	67	ND<1.0	ND<1.0	ND<2.0	ND<2.0
6/24/04	2,300	280	27	45	30	262	440	100	1,200	ND<1.0	ND<1.0	ND<2.0	ND<2.0
7/27/04	3,400	220	53	39	30	203	720	140	1,400	ND<1.0	ND<1.0	ND<2.0	ND<2.0
9/21/04	2,700	—	70	73	43	277	180	58	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<2.0
10/19/04	3,600	1,200	74	59	43	620	71	35	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<2.0
2/16/05	4,100	410	24	18	52	440	200	77	1,300	ND<1.0	ND<1.0	ND<2.0	ND<2.0
3/15/05	5,300	570	20	21	83	920	320	85	800	ND<1.0	ND<1.0	ND<2.0	ND<2.0
5/12/05	3,300	130	5.3	10	16	212	ND<10	3.0	ND<25	ND<1.0	ND<1.0	ND<2.0	ND<2.0
8/9/05	2,800	240	4	7	24	297	40	15	280	ND<1.0	ND<1.0	ND<2.0	ND<2.0

TABLE I: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 11DN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHP	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DPE	TBP
MW-6		12,500	500	500	300	300	300	3,200	420	ND<200	ND<20	---	---
Baseline Data	11/12/02	18,000	260	160	690	480	3,070	---	---	---	---	---	---
11/27/02	2,400	ND<50	2.3	ND<0.50	ND<0.50	ND<0.50	4,800	260	610	16	ND<10	ND<10	ND<10
12/10/02	6,800	ND<50	18	37	28	650	2,500	320	420	ND<5.0	ND<5.0	ND<10	ND<10
12/23/02	2,300	84	2.7	5.5	2.9	121	580	82	78	ND<1.0	ND<1.0	ND<2.0	ND<2.0
1/9/03	2,900	190	1.6	3.9	1.4	81	790	97	470	ND<1.0	ND<1.0	---	---
1/30/03	1,900	81	1.5	3.4	3.4	87	1,000	130	290	ND<1.0	ND<1.0	ND<2.0	ND<2.0
2/12/03	1,300	56	1.5	1.7	ND<0.50	49	700	65	220	ND<1.0	ND<1.0	ND<2.0	ND<2.0
3/12/03	210	ND<50	ND<0.50	ND<0.50	ND<0.50	7.2	84	11	47	ND<1.0	ND<1.0	ND<2.0	ND<2.0
4/17/03	510	58	ND<0.50	1.5	2.2	36	ND<10	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
5/14/03	510	ND<50	ND<0.50	1.4	ND<5.0	15.5	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
6/10/03	1,100	98	0.6	3.2	ND<5.0	25.3	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
7/16/03	430	ND<50	ND<0.50	1.1	ND<5.0	17.2	5.2	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
8/15/03	280	ND<50	ND<0.50	0.8	ND<5.0	12.0	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
9/16/03	150	ND<50	ND<0.50	ND<5.0	ND<5.0	2.5	4.1	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
10/15/03	370	ND<50	ND<0.50	0.57	ND<5.0	3.2	ND<10	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
11/19/03	150	ND<50	ND<5.0	ND<5.0	ND<5.0	1.4	ND<10	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
12/11/03	470	ND<50	ND<0.50	0.78	0.52	8.7	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
1/14/04	650	ND<50	ND<0.50	0.52	0.52	8.0	ND<3.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
2/9/04	560	53	ND<50	ND<0.50	ND<5.0	5.4	ND<8.0	1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<2.0
3/10/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<2.0
4/14/04	240	ND<50	ND<0.50	ND<0.50	ND<0.50	1.9	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<2.0
5/13/04	370	ND<50	ND<0.50	ND<0.50	ND<0.50	1.4	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<2.0
6/24/04	83	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0
7/27/04	130	ND<50	ND<0.50	ND<0.50	ND<0.50	1.51	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0
9/21/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
10/19/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.6	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
2/16/05	260	ND<50	ND<0.50	ND<0.50	ND<0.50	0.54	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0
5/12/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0
8/9/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS

HPI / Crescent City Shell, PFP, LACO Project No. 5282.01

1006 N. Highway 101, Crescent City, CA, Case No. 1TDN026

## Contaminants of Concern

PARGs	Date	TPHg			TPHd			Benzene			Toluene			Ethyllbenzene			Total Xylenes			MTBE			TAME			Fuel Oxygenates		
		12,500	500	300	500	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
OW-5	1/1/12/02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1/9/03	390	77	3.5	1.0	1.7	3.5	1.7	0.56	0.63	0.63	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
	1/30/03	3,000	230	4.7	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50										
	2/12/03	2,200	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50											
	3/12/03	1,000	120	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50											
	4/17/03	800	91	8.6	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0	ND<0.50	15	2.0
	5/14/03	210	56	2.5	ND<0.50	11	ND<0.50	1.7	ND<0.50	1.7	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5	ND<0.50	1.5
	6/10/03	450	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	7/16/03	170	ND<50	2.7	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50										
	8/15/03	210	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	9/16/03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10/15/03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	11/19/03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	12/11/03	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	1/14/04	52	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	2/9/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	3/10/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	4/14/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	5/13/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	6/24/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	7/27/04	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	9/21/04	62	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	10/19/04	2/16/05	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	3/15/05	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	5/12/05	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	
	8/9/05	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	

TABLE I: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 17DN026

PARGs	Date	Contaminants of Concern						Fuel Oxygenates					
		TPHg	TPHd	Benzene	Toluene	Ethybenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DiPE	TBF
MW-7	11/12/02	12,500	500	500	300	300	300	—	—	—	—	—	—
Baseline Data	11/12/02	5,600	160	83	ND<0.50	14	130	5,800	550	200	ND<10	ND<10	—
11/27/02	1,900	ND<50	0.90	ND<0.50	0.91	3.1	3,000	220	380	6.2	ND<1.0	ND<20	—
12/10/02	1,600	ND<50	28	ND<2.5	7.0	ND<2.5	3,700	180	360	5.6	ND<5.0	ND<10	—
12/23/02	2,900	ND<50	0.58	ND<5.0	0.9	0.6	6,000	350	750	6.1	ND<1.0	ND<10	—
1/9/03	3,200	ND<50	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6,700	330	1,000	6.7	ND<1.0	—	—
1/30/03	3,000	ND<50	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5,400	270	2,000	6.7	ND<5.0	2.9	—
2/12/03	3,100	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3,300	84	200	5.3	ND<5.0	ND<2.0	—
3/12/03	1,000	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2,000	ND<1.0	31	2.7	ND<1.0	ND<2.0	—
4/17/03	590	ND<50	2.1	ND<0.50	ND<0.50	3.1	860	47	ND<20	2.0	ND<1.0	ND<2.0	—
5/14/03	450	ND<50	1.4	ND<0.50	0.53	0.82	1,500	79	ND<20	2.6	ND<1.0	ND<2.0	—
6/10/03	200	ND<50	0.54	ND<0.50	ND<0.50	ND<0.50	190	11	ND<20	ND<1.0	ND<1.0	ND<2.0	—
7/16/03	87	ND<50	1.6	ND<0.50	ND<0.50	ND<0.50	97	5	ND<20	ND<1.0	ND<1.0	ND<2.0	—
8/15/03	130	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	170	10	ND<20	ND<1.0	ND<1.0	ND<2.0	—
9/16/03	140	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	89	4.7	ND<20	ND<1.0	ND<1.0	ND<2.0	—
10/15/03	230	ND<50	2.2	ND<0.50	0.5	ND<0.50	170	13	ND<20	ND<1.0	ND<1.0	ND<2.0	—
11/19/03	61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	28	1.7	ND<20	ND<1.0	ND<1.0	ND<2.0	—
12/11/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	42	2.9	ND<20	ND<1.0	ND<1.0	ND<2.0	—
1/14/04	52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	62	4.3	ND<20	ND<1.0	ND<1.0	ND<2.0	—
2/9/04	81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	51	3.5	ND<10	ND<1.0	ND<1.0	ND<2.0	—
3/10/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	46	2.4	ND<10	ND<1.0	ND<1.0	ND<2.0	—
4/14/04	55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	35	2.7	ND<10	ND<1.0	ND<1.0	ND<2.0	—
5/13/04	88	ND<50	1.4	ND<0.50	ND<0.50	ND<0.50	95	6.7	ND<10	ND<1.0	ND<1.0	ND<2.0	—
6/24/04	180	ND<50	0.63	ND<0.50	ND<0.50	ND<0.50	190	18	ND<10	ND<1.0	ND<1.0	ND<2.0	—
7/27/04	120	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140	11	ND<10	ND<1.0	ND<1.0	ND<2.0	—
9/21/04	270	ND<50	0.54	ND<0.50	ND<0.50	ND<0.50	280	38	ND<10	ND<1.0	ND<1.0	ND<2.0	—
10/19/04	65	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	90	7.0	ND<10	ND<1.0	ND<1.0	ND<2.0	—
2/16/05	250	ND<50	1.6	ND<0.50	ND<0.50	ND<0.50	240	38	210	ND<1.0	ND<1.0	ND<2.0	—
5/12/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.2	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0	—
8/9/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	1.6	ND<10	ND<1.0	ND<1.0	ND<2.0	—

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDNv26

PARGs	Date	Contaminants of Concern										Fuel Oxygenerates				
		TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DIPE	TBF	---	---	---
OW-4	12,500	500	500	300	300	300	300	300	300	300	300	300	ND<10	ND<10	ND<10	---
Baseline Data	10/9/02	18,000	---	250	88	2,500	479	220	52	ND<100	ND<10	ND<10	---	---	---	---
12/23/02	560	ND<50	ND<0.50	29	22	260	11	ND<100	3	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
1/9/03	2,800	590	7.6	4.0	83	86	150	19	310	1.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
1/30/03	190	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	130	3.9	1,100	1.5	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
2/12/03	2,000	170	ND<0.50	ND<0.50	13	16	100	1.4	ND<20	1.1	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
3/12/03	1,800	300	ND<0.50	ND<0.50	30	27	7.9	ND<1.0	72	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
4/17/03	2,200	390	ND<0.50	0.60	91	90	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
5/14/03	290	ND<50	ND<0.50	ND<0.50	3.5	3.7	4.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
6/10/03	6,400	1,600	0.88	2.8	160	182	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
7/16/03	1,900	170	ND<0.50	1.30	110	97	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
8/15/03	560	---	ND<0.50	ND<0.50	47	16.98	ND<5.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
9/16/03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/15/03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/19/03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/11/03	1,600	270	6.2	0.99	51	38	ND<50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
1/14/04	2,000	110	ND<0.50	0.52	100	54	35	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
2/9/04	2,500	190	ND<0.50	ND<0.50	83	61	ND<4.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
3/10/04	790	80	ND<0.50	ND<0.50	43	20	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
4/14/04	4,700	370	ND<0.50	ND<0.50	160	124	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
5/13/04	1,500	ND<50	ND<0.50	ND<0.50	81	36	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
6/24/04	2,100	160	ND<0.50	1.2	94	47	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
7/27/04	2,100	150	ND<0.50	ND<0.50	100	47	2.3	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
9/21/04	---	---	---	---	---	---	dry well	---	---	---	---	---	---	---	---	---
10/19/04	500	180	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
2/16/05	4,100	580	3.5	ND<0.50	170	76.6	ND<1.0	1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
3/15/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
5/12/05	ND<50	59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0
8/9/05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1: PERFORMANCE MONITORING SAMPLING RESULTS

HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
1006 N. Highway 101, Crescent City, CA, Case No. ITDN026

PARGS	Date	Contaminants of Concern										Fuel Oxygenates						
		TPH <sup>g</sup>	TPH <sup>d</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	ETBE	DIPE	TBF	---	---	---		
MW-8	11/12/02	2,700	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4,900	380	1,200	14	ND<10	---	---	---	---		
Baseline Data																		
11/27/02	830	ND<50	4.20	ND<0.50	0.92	ND<0.50	1,200	73	710	6.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
12/23/02	280	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1,300	14	ND<160	3.9	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
1/9/03	120	ND<50	ND<5.0	ND<5.0	ND<5.0	ND<5.0	170	8.5	56	1.7	ND<1.0	---	---	---	---	---		
1/30/03	140	ND<50	5.0	ND<2.5	ND<2.5	ND<2.5	190	5.0	57	2.3	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
2/12/03	76	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140	2.8	ND<20	2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
3/12/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.8	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
4/17/03	75	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.99	1.7	3.6	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0		
5/14/03	56	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.8	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
6/10/03	330	59	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.3	1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
7/16/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
8/15/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
9/16/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
10/15/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
11/19/03	96	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.51	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0
12/11/03	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
1/14/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
2/9/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
3/10/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
4/14/04	210	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.66	4.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
5/13/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
6/24/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
7/27/04	62	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
9/21/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
10/19/04	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
2/16/05	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.8	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
5/12/05	2,200	220	9.3	ND<0.50	32	14	3.3	1.7	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	
8/9/05	1,500	270	1.3	ND<0.50	33	8.1	ND<2.0	ND<1.0	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	

Note: "—" indicates that an analyte was not sampled for.  
ND indicates results below the laboratory detection limits.

TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>MW-1</b>					
8/18/99	15.7	6.22	820	-26	3.50
12/12/99	16.2	6.99	800	-183	0.50
2/15/00	15.0	6.68	870	-134	0.60
5/30/00	15.6	6.78	730	-119	1.00
8/29/00	18.8	6.82	770	115	1.00
11/8/00	18.1	---	700	-105	3.20
2/7/01	13.6	---	710	-79	---
4/24/01	13.8	6.91	330	-90	0.60
8/8/01	---	---	---	---	---
11/13/01	---	---	790	-101	0.00
2/5/02	Not sampled due to the presence of free product.				---
5/7/02	Not sampled due to the presence of free product.				---
8/14/02	Not sampled due to the presence of free product.				---
12/23/02	---	---	---	-41	6.50
1/9/03	---	---	---	7	7.30
1/30/03	---	---	---	-43	12.63
2/12/03	---	---	---	49	13.13
3/12/03	13.6	7.24	315	25	8.00
4/17/03	14.9	7.08	389	172	11.38
5/14/03	15.3	7.23	303	75	11.18
6/10/03	17.2	7.40	29	76	7.34
7/16/03	18.5	7.80	71	101	10.30
8/15/03	19.8	7.40	263	92	9.59
9/16/03	18.7	7.26	321	60	10.09
10/15/03	17.7	6.97	318	163	10.27
11/19/03	16.2	6.70	542	-13	5.85
12/11/03	15.6	7.83	392	135	6.62
1/14/04	---	---	---	---	---
2/9/04	13.8	6.59	404	52	11.42
3/10/04	15.5	7.40	326	23	10.29
4/14/04	13.8	7.60	455	47	7.93
5/13/04	17.6	7.50	399	150	8.17
6/24/04	18.7	7.12	420	86	7.28
7/27/04	19.4	7.10	391	32	3.12
8/26/04	20.1	7.80	395	-8	6.74
9/21/04	19.5	7.40	365	-26	6.74
10/16/04	17.2	7.40	342	24	6.86
2/16/05	13.4	7.10	288	65	8.01
3/15/05	15.2	7.42	389	-8	8.71
5/12/05	16.0	7.10	505	157	7.53
8/9/05	18.4	7.50	364	31	1.02
<b>MW-2</b>					
8/18/99	14.5	6.32	280	160	4.40
12/12/99	16.5	6.45	220	72	5.00
2/15/00	14.0	6.50	120	57	5.10
5/30/00	15.8	6.99	150	210	7.80
8/29/00	18.4	6.76	230	210	2.30
11/8/00	18.6	---	440	20	1.50
2/7/01	13.4	---	100	270	---
4/24/01	13.9	7.86	---	265	6.30
8/8/01	---	---	---	---	---
11/13/01	---	7.93	530	-55	0.00
2/5/02	10.5	7.63	---	207	6.60
5/7/02	---	6.80	123	11	6.10

**TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>MW-2 continued</b>					
8/14/02	16.6	3.72	227	200	5.16
12/23/02	---	---	---	14	4.20
1/9/03	---	---	---	19	4.00
1/30/03	---	---	---	8	2.62
2/12/03	---	---	---	-12	5.12
3/12/03	13.7	7.07	103	56	3.40
4/17/03	13.6	6.38	186	61	0.20
5/14/03	14.4	7.10	170	47	0.57
6/10/03	15.8	6.40	24	-1	0.00
7/16/03	18.0	6.00	0	-10	0.29
8/15/03	20.6	5.70	114	115	1.06
9/16/03	18.8	6.86	243	52	0.62
10/15/03	18.4	6.71	275	119	0.72
11/19/03	16.9	5.90	278	-21	1.69
12/11/03	14.1	7.38	192	169	2.40
1/14/04	13.1	6.00	129	162	4.42
2/9/04	12.5	6.40	114	153	4.89
3/10/04	13.4	6.40	113	66	5.34
4/14/04	13.5	6.90	142	79	5.59
5/13/04	14.2	7.47	116	129	5.50
6/24/04	18.5	5.80	160	143	1.85
7/27/04	18.9	6.60	185	129	2.05
8/26/04	20.2	6.30	179	123	2.99
9/21/04	19.3	6.20	224	107	0.73
10/19/04	18.1	6.30	225	130	6.86
2/16/05	12.7	6.50	110	103	6.63
5/12/05	15.3	6.65	120	121	7.28
8/9/05	16.5	6.29	190	113	2.33
<b>MW-3</b>					
8/18/99	15.1	6.38	370	129	4.40
12/12/99	17.2	6.34	260	86	3.60
2/15/00	15.9	6.45	280	6	1.90
5/30/00	16.2	6.55	270	141	2.80
8/29/00	18.8	6.74	240	192	3.50
11/8/00	18.8	---	310	47	4.10
2/7/01	13.7	---	230	260	---
4/24/01	14.2	7.26	---	313	3.40
8/8/01	---	---	---	---	---
11/13/01	---	8.21	230	20	0.00
2/5/02	12.7	6.55	---	406	3.50
5/7/02	---	6.72	257	16	4.60
8/14/02	17.4	2.82	14	154	7.96
5/14/03	14.9	7.12	250	73	5.06
7/21/03	---	---	---	---	---
8/15/03	21.7	6.00	175	149	5.79
11/19/03	17.6	7.14	168	70	6.93
2/9/04	12.7	6.44	286	81	3.94
5/13/04	17.1	6.20	197	161	6.50
8/26/04	21.6	6.4	146	83	5.44
10/19/04	---	---	---	---	---
2/16/05	---	---	---	---	---
5/12/05	16.0	6.50	256	115	3.81
8/9/05	20.1	6.90	159	48	5.79
<b>MW-4</b>					
8/18/99	15.5	6.31	650	53	3.90
12/12/99	16.1	6.58	400	25	1.10
2/15/00	15.0	6.45	300	83	2.30

TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>MW-4 Cont'd</b>					
5/30/00	16.1	6.32	320	129	1.70
8/29/00	18.1	6.98	530	-97	1.60
11/8/00	18.1	---	570	-21	1.40
2/7/01	15.0	---	510	-17	---
4/24/01	13.4	6.94	---	189	1.10
8/8/01	---	---	---	---	---
11/13/01	---	7.47	554	-98	0.00
2/5/02	12.7	5.72	---	31	3.90
5/7/02	---	6.92	395	16	1.90
8/14/02	16.1	3.50	326	79	2.50
12/23/02	---	---	---	10	6.80
1/9/03	---	---	---	-9	7.20
1/30/03	---	---	---	-56	11.28
2/12/03	---	---	---	63	11.53
3/12/03	13.8	7.09	137	99	8.60
4/17/03	15.2	6.81	211	216	10.17
5/14/03	15.5	7.19	196	123	10.53
6/10/03	16.8	6.40	17	103	3.61
7/16/03	18.5	7.10	80	97	9.12
8/15/03	20.7	6.90	392	113	8.41
9/16/03	19.1	7.53	467	95	8.83
10/15/03	17.5	6.95	387	171	9.93
11/19/03	17.1	7.45	293	126	0.54
12/11/03	15.0	7.58	277	167	1.75
1/14/04	14.1	6.20	208	172	11.30
2/9/04	13.2	6.70	272	71	11.78
3/10/04	14.9	6.40	214	43	10.05
4/14/04	14.1	6.80	277	83	9.21
5/13/04	17.2	8.00	326	160	8.10
6/24/04	18.7	6.83	322	138	4.80
7/27/04	18.6	7.10	331	135	3.08
8/26/04	20.7	7.10	294	117	5.91
9/21/04	19.6	6.90	309	122	6.05
10/19/04	17.6	6.80	279	168	6.89
2/16/05	15.1	6.3	223	125	1.82
5/12/05	15.3	6.5	336	190	6.53
8/9/05	17.6	6.5	269	60	0.97
<b>MW-5</b>					
12/13/01	---	---	---	---	---
2/5/02	11.6	7.27	---	472	3.50
5/7/02	---	6.95	566	-47	1.90
8/14/02	16.2	1.67	92	-18	3.05
12/23/02	---	---	---	-1	6.20
1/9/03	---	---	---	-31	8.10
1/30/03	---	---	---	-43	12.43
2/12/03	---	---	---	65	12.44
3/12/03	13.1	7.10	293	81	11.00
4/17/03	14.7	6.81	297	141	11.61
5/14/03	14.9	7.16	269	64	11.70
6/10/03	16.0	7.70	66	57	11.07
7/16/03	17.4	7.80	19	111	11.03
7/21/03	17.4	7.40	104	120	11.46
8/15/03	#	19.0	7.10	68	67
					10.44

TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity ( $\mu$ mos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>MW-5 Cont'd</b>					
9/16/03	17.7	7.04	242	58	10.53
10/15/03	17.1	6.77	210	153	10.99
11/19/03	16.4	7.41	181	124	10.01
12/11/03	15.5	7.70	240	135	10.48
1/14/04	—	—	—	—	—
2/9/04	14.2	7.10	210	143	10.71
3/10/04	15.4	6.90	220	36	11.98
4/14/04	13.2	7.60	280	53	12.08
5/13/04	17.1	7.92	260	99	8.88
6/24/04	17.6	7.40	332	90	8.19
7/27/04	18.3	7.50	277	76	6.73
8/26/04	20.9	7.30	231	91	7.61
9/21/04	18.7	7.40	240	91	8.21
10/19/04	16.5	7.10	231	124	10.88
2/16/05	14.9	7.00	213	76	11.41
3/15/05	15.0	7.31	301	33	10.59
5/12/05	15.6	7.10	328	161	9.23
8/9/05	16.2	6.53	306	110	1.16
<b>MW-6</b>					
12/23/02	—	—	—	—	—
1/9/03	—	—	—	-38	3.00
1/30/03	—	—	—	32	2.90
2/12/03	—	—	—	-1	3.87
3/12/03	—	—	—	-56	6.58
4/17/03	13.4	7.13	344	22	6.50
5/14/03	15.0	6.43	365	39	4.40
6/10/03	17.6	6.70	219	190	3.50
7/16/03	—	—	—	—	—
8/15/03	20.4	6.30	36	144	1.32
9/16/03	21.8	7.10	213	19	1.71
10/15/03	18.6	7.52	253	-18	1.82
11/19/03	17.2	6.80	225	-17	1.55
12/11/03	17.7	7.52	189	97	0.92
1/14/04	16.3	7.70	217	150	1.25
2/9/04	—	—	—	—	—
3/10/04	16.0	6.20	192	80	1.64
4/14/04	15.7	6.00	167	27	0.92
5/13/04	15.0	6.60	207	35	1.30
6/24/04	18.4	6.00	196	13	1.54
7/27/04	19.1	6.20	211	—	1.82
8/26/04	19.7	6.70	196	5	2.15
9/21/04	—	—	—	—	—
10/19/04	17.9	6.80	180	55	1.60
2/16/05	15.7	6.30	156	84	0.90
5/12/05	17.3	6.47	180	91	0.94
8/9/05	19.5	6.41	194	-53	0.21
<b>MW-7</b>					
12/23/02	—	—	—	—	—
1/9/03	—	—	—	-48	10.30
1/30/03	—	—	—	-36	4.80
2/12/03	—	—	—	-24	6.64
3/12/03	—	—	—	8	7.81
4/17/03	13.6	7.26	374	58	6.80
5/14/03	15.2	6.89	425	99	9.40
6/10/03	15.6	7.40	378	170	9.70
7/16/03	16.3	7.30	9	151	9.42
8/15/03	19.1	7.40	9	127	8.82
9/16/03	19.5	7.40	262	112	8.47
10/15/03	18.4	7.66	300	9	8.35

**TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA, Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>MW-7 Cont'd</b>					
11/19/03	16.4	6.96	291	35	8.16
12/11/03	---	---	---	---	---
1/14/04	15.1	7.77	310	139	8.24
2/9/04	---	---	---	---	---
3/10/04	14.1	7.30	255	151	9.12
4/14/04	14.8	7.20	258	49	9.75
5/13/04	13.9	7.40	321	38	9.82
6/24/04	16.1	7.72	312	69	6.80
7/27/04	17.4	6.93	299	---	0.58
8/26/04	17.5	7.40	282	22	2.43
9/21/04	19.9	7.19	328	147	4.13
10/16/04	15.4	7.00	260	-6	3.77
2/16/05	14.5	6.92	437	128	5.46
5/12/05	15.7	7.20	288	86	7.77
8/9/05	17.3	6.80	307	-41	0.41
<b>MW-8</b>					
12/23/02					
1/9/03	---	---	---	-31	8.30
1/30/03	---	---	---	-30	8.80
2/12/03	---	---	---	-52	12.17
3/12/03	---	---	---	---	---
4/17/03	14.0	7.19	309	66	7.10
5/14/03	15.3	7.49	483	121	10.80
6/10/03	16.3	8.00	444	162	10.60
7/16/03	18.6	7.30	106	90	4.25
8/15/03	19.8	7.90	128	38	8.87
9/16/03	21.2	7.60	359	73	8.69
10/15/03	20.5	7.81	439	47	8.83
11/19/03	18.1	7.07	366	85	9.59
12/11/03	16.5	7.10	433	41	1.54
1/14/04	16.3	7.78	499	70	1.10
2/9/04	---	---	---	---	---
3/10/04	14.9	7.20	394	131	9.61
4/14/04	15.3	7.40	483	33	10.12
5/13/04	14.6	7.70	464	27	5.75
6/24/04	16.8	7.10	403	148	5.67
7/27/04	19.3	7.23	371	-11	1.25
8/26/04	18.6	7.60	298	1	1.39
9/21/04	---	---	---	---	---
10/16/04	18.0	7.10	286	27	2.42
2/16/05	14.5	7.26	426	20	1.98
5/12/05	17.0	6.70	323	-5	0.68
8/9/05	19.6	7.30	291	-65	0.25
<b>OW-1</b>					
2/5/02					
5/7/02	12.2	6.12	---	273	2.60
8/14/02	---	6.79	569	82	2.80
5/14/03	15.5	3.23	12	140	4.04
8/15/03	15.3	6.20	309	260	8.60
11/19/03	Not enough water for sample				
2/9/04	---	---	---	---	---
5/13/04	13.3	6.16	285	84	10.56
8/26/04	17.1	5.90	253	224	7.86
10/19/04	---	---	---	---	---
2/16/05	14.6	6.49	394	167	8.70
5/12/05	16.2	6.45	246	54	6.54
8/9/05	17.8	7.00	187	-30	2.86

TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses						
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)	
<b>OW-2</b>						
2/5/02						
5/7/02	11.6	6.08	---	71	2.50	
8/14/02	---	6.79	550	80	2.80	
5/14/03	Not enough water for sample			---	---	
8/15/03	15.7	6.40	379	232	3.70	
11/19/03	Not enough water for sample					
2/9/04						
5/13/04	14.7	6.1	256	185	8.20	
8/26/04	18.6	7.8	307	215	6.23	
10/19/04	---	---	---	---	---	
2/16/05	14.5	6.4	358	173	5.48	
5/12/05	16.7	6.5	240	119	5.76	
8/9/05	18.7	6.9	220	-19	5.12	
<b>OW-3</b>						
2/5/02						
5/7/02	12.7	6.21	---	-44	2.20	
8/14/02	---	6.88	826	-54	2.50	
12/23/02	Not enough water for sample			---	---	
1/9/03	---	---	---	-50	4.10	
1/30/03	---	---	---	-9	2.80	
2/12/03	---	---	---	-18	4.15	
3/12/03	---	---	---	---	6.39	
4/17/03	14.4	7.04	369	9	3.90	
5/14/03	15.6	6.31	432	-10	4.30	
6/10/03	16.2	6.50	322	-12	3.00	
7/16/03	17.6	7.19	549	-3	3.60	
8/15/03	21.5	6.60	154	-19	4.46	
11/19/03	Not enough water for sample					
12/11/03	---	---	---	---	---	
1/14/04	16.8	7.63	362	13	0.49	
2/9/04	---	---	---	---	---	
3/10/04	15.2	6.40	248	41	0.45	
4/14/04	#	15.7	6.10	250	-21	0.94
5/13/04	15.6	6.80	376	-45	0.98	
6/24/04	19.1	6.20	331	---	0.38	
7/27/04	19.5	6.40	420	---	4.18	
8/26/04	20.0	7.00	417	---	1.02	
9/21/04	---	---	---	---	---	
10/16/04	---	---	---	---	---	
2/16/05	15.6	6.74	396	-54	0.41	
3/15/05	16.6	6.57	480	-67	0.49	
5/12/05	17.5	6.67	228	-36	1.21	
8/9/05	20.4	6.52	291	-88	1.03	
<b>OW-4</b>						
2/5/02						
5/7/02	11.6	6.67	---	-115	2.30	
8/14/02	---	6.99	675	-69	2.00	
12/23/02	17.5	3.29	63	-30	1.44	
1/9/03	---	---	---	-19	7.00	
1/30/03	---	---	---	-13	5.50	
2/12/03	---	---	---	-59	10.66	
3/12/03	---	---	---	19	11.72	
4/17/03	13.8	7.27	361	55	6.10	
5/14/03	15.5	7.11	597	125	7.80	
6/10/03	17.1	7.80	227	117	7.40	

**TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity (μmhos)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>OW-4 Continued</b>					
7/16/03	18.0	7.44	500	62	3.30
8/15/03	21.2	7.40	166	-5	7.45
11/19/03	Not enough water for sample				
12/11/03	---	---	---	---	---
1/14/04	---	---	---	---	---
2/9/04	12.7	6.90	432	177	8.74
3/10/04	13.8	6.90	370	137	6.19
4/14/04	14.2	7.20	380	31	9.03
5/13/04	14.1	7.20	448	8	0.95
6/24/04	17.6	6.70	405	68	2.17
7/27/04	19.8	7.13	369	-12	6.67
8/26/04	---	---	---	---	---
9/21/04	---	---	---	---	---
10/16/04	---	---	---	---	---
2/16/05	13.6	6.92	436	-17	0.47
3/15/05	15.1	7.39	354	-72	1.19
5/12/05	16.2	7.22	302	38	2.16
8/9/05	17.9	7.50	277	-43	0.69
<b>OW-5</b>					
2/5/02					
5/7/02	11.1	7.03	---	16	2.60
8/14/02	---	6.94	744	-82	2.30
1/9/03	Sample not collected due to free product				
1/30/03	---	---	---	-29	3.90
2/12/03	---	---	---	-28	10.42
3/12/03	---	---	---	-3	10.61
4/17/03	13.9	7.29	267	35	4.70
5/14/03	14.3	6.55	434	134	8.60
6/10/03	16.0	6.80	416	135	6.20
7/16/03	16.4	7.39	414	131	4.00
8/15/03	18.3	6.60	13	151	5.91
11/19/03	Not enough water for sample				
12/11/03	---	---	---	---	---
2/9/04	14.2	7.70	245	136	4.39
3/10/04	13.5	6.80	386	152	5.73
4/14/04	13.8	6.90	410	43	4.92
5/13/04	13.9	7.10	461	43	3.82
6/24/04	16.3	7.77	422	192	2.73
7/27/04	17.1	6.40	349	146	1.28
8/26/04	---	---	---	---	---
10/19/04	---	---	---	---	---
2/16/05	13.0	6.76	428	123	0.31
3/15/05	14.8	6.92	354	-52	0.36
5/12/05	15.5	7.21	298	40	0.38
8/9/05	17.3	6.61	336	-53	0.49
<b>PZ-1</b>					
11/20/01					
2/5/02	---	6.70	377	124	3.30
5/7/02	12.2	6.40	---	267	4.30
8/14/02	---	---	---	---	---
5/14/03	---	---	---	---	---
7/16/03	---	---	---	---	---
7/21/03	19.5	6.00	70	160	5.13
11/19/03	19.1	5.90	55	153	5.77
2/9/04	15.7	6.00	357	78	6.09
5/13/04	13.6	6.0	368	177	6.12
6/24/04	17.1	7.74	314	149	5.15

TABLE 2: INTRINSICS ANALYSES MONITORING RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Field Analyses					
WELL/ Sample Date	Temperature (Celsius)	pH	Conductivity ( $\mu$ mohs)	ORP (mV)	Dissolved Oxygen (mg/l)
<b>PZ-1 Continued</b>					
8/26/04	17.9	6.08	263	71	4.27
10/19/04	---	---	---	---	---
2/16/05	22.0	6.2	231	104	4.33
5/12/05	15.9	6.0	283	212	3.79
8/9/05	19.3	6.6	191	69	3.28
<b>DW-Totem</b>					
8/18/99					
12/12/99	14.0	6.74	180	175	5.00
2/15/00	13.1	6.31	200	91	15.10
5/30/00	12.1	6.47	160	123	1.60
8/29/00	13.7	6.65	190	-42	2.30
11/8/00	14.6	7.67	170	2	2.00
2/7/01	15.9	---	150	188	3.00
4/24/01	12.7	---	140	129	---
8/8/01	12.2	8.32	---	42	1.90
11/13/01	---	---	---	---	---
2/5/02	---	---	---	---	---
5/7/02	9.4	7.74	---	-547	4.50
8/14/02	---	6.76	217	-89	2.30
5/14/03	Sample not collected		---	---	---
11/19/03	12.0	7.20	160	14	0.03
2/9/04	14.0	6.60	164	-37	0.15
5/13/04	9.7	7.0	66	122	1.26
8/26/04	12.2	6.5	187	-36	0.70
10/19/04	---	---	---	---	---
2/16/05	---	---	---	---	---
5/12/05	13.3	6.64	169	-29	0.26
8/9/05	17.7	6.69	157	58	0.13

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1066 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements				Analytical Results							
WELL/ Sample Date	Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
			mcl(al)	1.0		1.0	150	700	1,700	13	
		tot	5	---	100	---	42	29	17	5	---
<b>MW-1</b>											
3/20/95	28.28	26.13	2.15	8,100	ND <50	27	85	58	299	---	---
4/13/95		25.72	2.56	---	---	---	---	---	---	---	---
5/15/95		24.62	3.66	---	---	---	---	---	---	---	---
6/13/95	23.38	4.90	77,000	170	ND <500	4,600	4,600	1,400	6,700	---	---
7/17/95	22.38	5.90	---	---	---	---	---	---	---	---	---
9/1/95	21.38	6.90	---	---	---	---	---	---	---	---	---
9/25/95	20.85	7.43	80,000	740	---	9,700	8,800	2,000	9,600	10,000	---
10/30/95	19.75	8.53	---	---	---	---	---	---	---	---	---
11/20/95	19.25	9.03	---	---	---	---	---	---	---	---	---
12/21/95	18.18	10.10	46,000	130	---	4,300	3,400	1,100	3,850	4,400	---
1/18/96	25.32	2.96	---	---	---	---	---	---	---	---	---
2/20/96	25.90	2.38	---	---	---	---	---	---	---	---	---
3/26/96	24.98	3.30	8,300	ND <50	---	1,500	240	330	680	7,200	---
4/15/96	24.84	3.44	---	---	---	---	---	---	---	---	---
6/7/96	23.94	4.34	---	---	---	---	---	---	---	---	---
6/28/96	22.84	5.44	48,000	150	---	7,500	6,200	1,500	6,800	14,000	---
7/17/96	22.12	6.16	---	---	---	---	---	---	---	---	---
9/13/96	20.44	7.84	58,000	2,600	---	11,000	7,900	1,600	7,400	11,000	---
10/9/96	19.94	8.34	---	---	---	---	---	---	---	---	---
11/27/96	22.67	5.61	---	---	---	---	---	---	---	---	---
12/23/96	25.37	2.91	29,000	230	---	9,200	1,200	1,800	2,300	19,000	---
1/30/97	25.67	2.61	---	---	---	---	---	---	---	---	---
2/21/97	25.27	3.01	---	---	---	---	---	---	---	---	---
3/20/97	24.67	3.61	15,000	ND <50	---	1,100	1,000	540	2,240	9,200	---
4/16/97	23.57	4.71	---	---	---	---	---	---	---	---	---
6/25/97	22.35	5.93	56,000	93	---	8,700	6,900	1,700	7,000	8,100	---
7/11/97	20.78	7.50	---	---	---	---	---	---	---	---	---
9/11/97	20.12	8.16	61,000	310	---	8,000	5,200	2,100	9,500	8,800	---
12/15/97	23.89	4.39	31,000	590	---	1,300	1,200	790	3,090	14,000	---
3/5/98	25.77	2.51	24,000	280	---	4,100	120	1,300	555	8,100	---

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP; LACO Project No. S282.01  
 1006 N Highway 101, Crescent City, CA; Case No. ITDNQ26

Sample Date	Well / Sample Date	Groundwater Measurements			Analytical Results							
		Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPH <sub>g</sub> (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>MW-1 Continued</b>												
6/17/98	23.01	5.27	68,000	390	---	6,500	6,200	1,500	6,800	19,000	---	
9/28/98	19.93	8.35	65,000	860	---	7,100	5,300	2,500	9,300	26,000	---	
12/18/98	25.10	3.18	18,000	300	---	3,100	180	920	1,280	33,000	---	
3/5/99	25.65	2.63	290,000	300	---	1,200	ND <100	380	450	30,000	TAME = 2,200 Other oxygenates ND Lead scavengers <200	
6/6/99	23.40	4.88	54,000	320	---	2,800	3,100	1,300	4,760	32,000	---	
8/18/99	20.80	7.48	88,000	440	---	6,100	6,700	3,200	11,900	36,000	TAME = 2,500 Other oxygenates ND <sup>4</sup>	
12/12/99	23.61	4.67	6,700	330	---	160	54	390	660	6,800	TAME = 750 Other oxygenates ND <sup>4</sup>	
2/15/00	25.49	2.79	12,000	290	---	970	100	570	615	11,000	TAME = 1,100 TBA = 1,100 Other oxygenates ND	
5/30/00	23.77	4.51	29,000	280	---	850	860	1,500	4,130	6,200	TAME = 1,300 Other oxygenates ND	
8/29/00	20.70	7.58	42,000	740	---	3,600	2,200	2,100	6,900	7,400	TAME = 1,500 Other oxygenates ND	
11/8/00	20.40	7.88	28,000	370	---	1,800	700	1,600	5,010	2,100	TAME = 790 Other oxygenates ND	
2/7/01	22.13	6.15	44,000	1,300	---	3,300	950	2,300	5,260	3,900	TAME = 830 Other oxygenates ND	
4/24/01	22.35	5.93	29,000	1,300	---	2,800	1,100	2,600	6,340	2,300	TAME = 470 Other oxygenates ND	
8/8/01	19.91	8.37	47,000	1,200	---	3,700	1,000	2,700	5,790	3,900	TAME = 650 TBA = 1,200 Other oxygenates ND	
11/13/01	17.36	10.92	81,000	2,300	---	2,000	9,900	2,900	15,100	2,000	TAME = 370 TBA = 890 Other oxygenates ND	
2/5/02	24.16	4.16	Unable to sample due to presence of free product (0.05 feet thick)									
5/7/02	23.84	4.50	Unable to sample due to presence of free product (0.07 feet thick)									
8/14/02	31.29	---	Unable to sample due to presence of free product (0.32 feet thick)			58	ND <25	ND <25	242	1,100	TAME = 98 TBA = 1000 Other oxygenates ND	
11/12/02	23.75	7.54	7,000	490	---							
11/26/02	22.11	9.18	870	970	370	ND <0.50	ND <0.50	2.0	2.0	740	TAME = 57 TBA = 460 ETBE= 1.4 Other oxygenates ND	

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS

HPI / Crescent City Shell, PRP, LACO Project No. 5282.01  
10006 N. Highway 101, Crescent City, CA; Case No. ITDN026

Groundwater Measurements				Analytical Results							
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
MW-1, Continued											
12/10/02	21.52	9.77	4,800	560	---	8.2	2.8	75	66.4	690	TAME = 32 TBA = 430 Other oxygenates ND
12/23/02	25.84	5.45	3,100	62	---	11	4.9	63	87.7	540	TAME = 43 ETBEm = 1.2 Other oxygenates ND
1/9/03	27.62	3.67	780	160	---	1.7	1.1	8.6	17.8	540	TAME = 53 TBA = 42 Other oxygenates ND
1/30/03	27.92	3.37	200	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	310	TAME = 18 other oxygenates ND
3/12/03	26.90	4.39	100	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	160	TAME = 8.8 other oxygenates ND
4/17/03	28.11	3.18	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	42	All other oxygenates ND
5/14/03	26.71	4.58	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	10	All other oxygenates ND
6/10/03	26.27	5.02	1,200	380	---	15	4.4	16	184	72	TAME = 17 TBA = 26 Other oxygenates ND
7/16/03	24.17	7.12	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	ND<1.0	All other oxygenates ND
8/15/03	23.06	8.23	ND<50	ND<50	---	ND<50	ND<50	1.3	1.1	ND<1.0	All other oxygenates ND
9/16/03	21.86	9.43	ND<50	ND<50	---	ND<50	ND<50	0.5	1.1	ND<1.0	All other oxygenates ND
10/15/03	21.08	10.21	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	ND<1.0	All other oxygenates ND
11/19/03	22.88	8.41	2,200	140	---	110	11	18	95	75	TAME = 18 TBA = 45 Other oxygenates ND
12/11/03	25.50	5.79	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	1.1	All other oxygenates ND
1/14/04	27.49	3.80	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	1.5	All other oxygenates ND
2/9/04	27.67	3.62	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	0.53	All other oxygenates ND
3/10/04	27.57	3.72	ND<50	ND<50	---	ND<50	ND<50	ND<50	ND<0.50	0.53	All other oxygenates ND
4/14/04	26.93	4.36	190	50	---	ND<50	ND<50	0.96	10.3	4.0	All other oxygenates ND
5/13/04	26.35	4.94	ND<50	ND<50	---	ND<50	ND<50	0.64	1.4	4.3	All other oxygenates ND
6/24/04	24.55	6.74	1,300	93	---	120	12	11	148	59	TAME = 31 TBA = 31 Other oxygenates ND
7/27/04	23.93	7.36	4,900	380	---	440	69	91	530	72	TAME = 24 TBA = 46 Other oxygenates ND
8/26/04	23.11	8.18	950	---	---	49	9.2	11	130	42	TAME = 9.1 Other oxygenates ND
9/21/04	22.59	8.70	590	67	---	27	6.4	8.7	85	34	TAME = 9.4 Other oxygenates ND
10/19/04	22.59	8.70	570	78	---	40	8.2	13	78	27	TAME = 5.2 Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements				Analytical Results							
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet msl)	TPHg (µg/l)	TPHD (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>MW-1 C-Continued</b>											
2/16/05	26.10	5.19	4,100	270	...	83	160	85	870	12	TAME = 5.8 Other oxygenates ND
3/15/05	25.58	5.71	1,100	68	...	42	15	10	198	28	TAME = 8.7 Other oxygenates ND
5/12/05	27.92	3.37	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	1.44	ND<1.0	All oxygenates ND
8/9/05	24.82	6.47	3,800	260	...	530	56	2.2	470	39	TAME = 44 Other oxygenates ND
<b>MW-2</b>											
3/20/95	27.11	26.06	1.05	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4/13/95	24.54	2.57	...	...	...	...	...	...	...	...	...
5/15/95	24.04	3.07	...	...	...	...	...	...	...	...	...
6/13/95	22.61	4.50	220	ND<50	ND<50	2.5	1.5	1.0	4.5	...	...
7/17/95	21.66	5.45	...	...	...	...	...	...	...	...	...
9/1/95	20.66	6.45	...	...	...	...	...	...	...	...	...
9/25/95	20.13	6.98	530	ND<50	ND<50	110	2.1	1.2	7.1	19	...
10/30/95	19.43	7.68	...	...	...	...	...	...	...	...	...
11/20/95	18.40	8.71	...	...	...	...	...	...	...	...	...
12/21/95	17.46	9.65	140	ND<50	ND<50	0.63	ND<0.5	ND<0.5	0.53	ND<5.0	...
1/18/96	25.61	1.50	...	...	...	...	...	...	...	...	...
2/20/96	26.05	1.06	...	...	...	...	...	...	...	...	...
3/26/96	24.59	2.52	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	...
4/15/96	24.49	2.62	...	...	...	...	...	...	...	...	...
6/7/96	23.31	3.80	...	...	...	...	...	...	...	...	...
6/28/96	22.03	5.08	150.0	ND<50	ND<50	6.1	4.7	1.0	3.5	ND<5.0	...
7/17/96	21.33	5.78	...	...	...	...	...	...	...	...	...
9/13/96	19.93	7.18	860	58	...	260	13	3.8	17.3	73	...
10/9/96	19.49	7.62	...	...	...	...	...	...	...	...	...
11/27/96	22.69	4.42	...	...	...	...	...	...	...	...	...
12/23/96	25.61	1.50	66	ND<50	ND<50	19	ND<0.5	ND<0.5	0.63	8.7	...
1/30/97	25.68	1.43	...	...	...	...	...	...	...	...	...
2/21/97	25.05	2.06	...	...	...	...	...	...	...	...	...
3/20/97	24.45	2.66	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	...
4/16/97	22.87	4.24	...	...	...	...	...	...	...	...	...
6/25/97	21.47	5.64	75	ND<50	ND<50	10	2.1	ND<0.5	1.98	79	...
7/11/97	16.38	10.73	...	...	...	...	...	...	...	...	...
9/11/97	19.65	7.46	3,700	250	...	1,100	22	7.3	39	1,000	...
12/15/97	23.95	3.16	160	84	...	65	1.3	0.58	2.8	73	...

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 528.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TIDN026

**Groundwater Measurements**

**Analytical Results**

WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
<b>MW-2 Continued</b>												
3/5/98	25.83	1.28	ND <50	ND <50	---	2.3	ND <0.5	ND <0.5	ND <0.5	ND <0.5	5.6	---
6/17/98	22.29	4.82	ND <50	ND <50	---	0.67	ND <0.5	ND <0.5	ND <0.5	ND <0.5	11	---
9/28/98	19.61	7.50	860	110	---	180	6.2	1.4	6.1	960	---	---
12/18/98	25.19	1.92	ND <50	ND <50	---	5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5	61	---
3/5/99	25.73	1.38	360	ND <50	---	0.57	ND <0.5	ND <0.5	ND <0.5	ND <0.5	10	Other oxygenates ND Lead scavengers >200
6/3/99	22.72	4.39	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	8.0	---
6/22/99	21.85	5.26	---	---	---	---	---	---	---	---	---	---
8/18/99	20.35	6.76	610	ND <50	---	70	6.7	1.1	13.6	930	---	---
12/12/99	24.31	2.80	89	ND <50	---	24	ND <0.5	ND <0.5	1.3	46	Other oxygenates ND	---
2/15/00	25.91	1.20	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	5.2	Other oxygenates ND
5/30/00	23.41	3.70	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	5.7	Other oxygenates ND
8/29/00	20.37	6.74	900	ND <50	---	58	0.63	ND <0.5	3.1	950	TAME = 40 TBA = 130 ETBE = 3.6 DIPE ND <1.0	---
11/8/00	20.07	7.04	4,000	57	---	970	ND <10	ND <10	ND <10	ND <10	1700	TAME = 120 TBA = 1900 ETBE = 2 DIPE ND <1.0
2/7/01	22.00	5.11	67	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	57	Other oxygenates ND TAME = 2 TBA = 470 ETBE = 3.8 DIPE = 1.4
4/24/01	22.05	5.06	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	18	Other oxygenates ND TAME = 71 TBA = 1900 ETBE = 5.4 DIPE = 1.4
8/8/01	19.69	7.42	2,100	78	---	920	3.5	ND <0.5	14	2,000	Other oxygenates ND TAME = 71 TBA = 1900 ETBE = 5.4 DIPE = 1.4	
11/13/01	18.32	8.79	6,400	86	---	580	4.1	1.2	7.7	6,200	TAME = 280 TBA = 1900 ETBE = 5.4 Other oxygenates ND	
12/13/01	23.94	3.17	---	---	---	---	---	---	---	---	---	---
2/5/02	25.21	1.90	ND <50	ND <50	---	1.5	ND <0.50	ND <0.50	ND <0.50	ND <0.50	25	TAME = 1.2 TBA = 1900 ETBE = 5.4
5/7/02	22.61	4.50	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	25	TAME = 1.3 TBA = 1900 ETBE = 5.4

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS  
HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Head (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg	TPHd	TPHmo	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
MW-2, Continued												
8/14/02	30.08	22.99	7.09	1,000	ND <50	ND <70	82	1.1	ND <0.50	1.6	4.50	TAME = 33 TBA = 54 Other oxygenates ND
11/12/02	21.73	8.35		5,700	75	---	1,500	1.7	ND <0.50	5.0	3,500	TAME = 240 TBA = 770 ETBE = 3.2 DIFP = ND <10 Other oxygenates ND
11/26/02	21.61	8.47		5,000	92	ND <170	1,200	0.6	ND <0.50	2.4	3,300	TAME = 200 TBA = 850 ETBE = 3.1 Other oxygenates ND
12/10/02	21.53	8.55		5,700	76	---	1,000	4.2	ND <0.50	5.3	3,100	TAME = 190 TBA = 600 Other oxygenates ND
12/23/02	26.83	3.25		430	ND <50	---	8.8	ND <0.50	0.61	0.82	90	TAME = 4.9 Other oxygenates ND
1/9/03	28.12	1.96		340	ND <50	---	1.3	ND <0.50	ND <0.50	ND <0.50	42	TAME = 2.7 Other oxygenates ND
1/30/03	29.65	0.43		470	ND <50	---	1.0	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
3/12/03	28.16	1.92		200	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
4/17/03	29.17	0.91		200	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
5/14/03	27.56	2.52		84	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
6/10/03	25.84	4.24		77	ND <50	---	1.1	0.66	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
7/16/03	24.37	5.71		65	ND <50	---	1.1	ND <0.50	ND <0.50	0.58	3.9	All oxygenates ND
8/15/03	23.54	6.54		84	ND <50	---	7.6	ND <0.50	ND <0.50	0.52	27	TAME = 1.4 Other oxygenates ND
9/16/03	22.84	7.24		650	ND <50	---	20	ND <0.50	0.63	2.16	390	TAME = 17 TBA=47 Other oxygenates ND
10/15/03	22.17	7.91		2,200	75	---	63	1.6	2.3	7.3	1,800	TAME = 95 TBA=200 Other oxygenates ND
11/19/03	22.35	7.73		1,200	ND <50	---	2.3	ND <0.50	ND <0.50	ND <0.50	1,200	TAME = 61 TBA=47 Other oxygenates ND
12/11/03	26.36	3.72		120	ND <50	---	3.0	ND <0.50	ND <0.50	ND <0.50	150	TAME = 8.8 Other oxygenates ND
1/14/04	28.69	1.39		ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	36	TAME = 2.0 Other oxygenates ND
2/9/04	28.55	1.53		ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	16	TAME = 1.1 Other oxygenates ND
3/10/04	27.78	2.30		ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	9.2	All oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA, Case No. 1TDN026

Groundwater Measurements				Analytical Results							
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPH <sub>g</sub> (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>MW-2 Continued</b>											
4/14/04	26.64	3.44	ND <50	ND >50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	10	All oxygenates ND
5/13/04	25.96	4.12	ND <50	ND >50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	6.8	All oxygenates ND
6/24/04	24.29	5.79	210	ND <50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	160	TAME = 14 Other oxygenates ND
7/27/04	23.78	6.30	160	ND <50	---	6.0	ND >0.50	ND <0.50	1.13	97	TAME = 6.1 Other oxygenates ND
8/26/04	22.98	7.10	500	ND <50	---	84	ND >0.50	ND <0.50	ND <0.50	350	Other oxygenates ND
9/21/04	22.49	7.59	930	ND <50	---	94	ND >0.50	ND <0.50	0.65	620	TAME = 63 TBA = 68 Other oxygenates ND
10/19/04	22.49	7.59	680	ND <50	---	26	ND >0.50	ND <0.50	ND <0.50	680	TAME = 77 Other oxygenates ND
2/16/05	25.81	4.27	ND <50	ND <50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	40	TAME = 2.5 Other oxygenates ND
5/12/05	27.79	2.29	ND <50	ND <50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	4.4	All oxygenates ND
8/9/05	23.92	6.16	330	ND <50	---	ND <0.50	ND >0.50	ND <0.50	ND <0.50	260	TAME = 30 Other oxygenates ND
<b>MW-3</b>											
3/20/95	28.99	26.89	2.10	ND <50	ND <500	ND <0.5	ND <0.5	ND <0.5	ND <0.5	---	---
4/13/95	27.61	1.38	---	---	---	---	---	---	---	---	---
5/15/95	25.12	3.87	---	---	---	---	---	---	---	---	---
6/13/95	23.95	5.04	ND <50	ND <50	1.4	1.7	ND <0.5	0.76	---	---	---
7/17/95	22.93	6.06	---	---	---	---	---	---	---	---	---
9/1/95	21.93	7.06	---	---	---	---	---	---	---	---	---
9/25/95	21.07	7.92	ND <50	---	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
10/3/95	19.86	9.13	---	---	---	---	---	---	---	---	---
11/20/95	19.26	9.73	---	---	---	---	---	---	---	---	---
12/21/95	18.69	10.30	ND <50	---	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
1/18/96	26.27	2.72	---	---	---	---	---	---	---	---	---
2/20/96	26.67	2.32	---	---	---	---	---	---	---	---	---
3/26/96	25.49	3.50	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
4/15/96	25.39	3.60	---	---	---	---	---	---	---	---	---
6/7/96	24.47	4.52	---	---	---	---	---	---	---	---	---
6/28/96	23.39	5.60	ND <50	---	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
7/17/96	22.53	6.46	---	---	---	---	---	---	---	---	---
9/13/96	20.63	8.36	ND <50	---	2.6	2.5	0.55	2.08	ND <5.0	---	---
10/9/96	20.15	8.84	---	---	---	---	---	---	---	---	---

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**

HPI / Crescent City Shell, PFP, LACO Project No. 5282-01  
1006 N. Highway 101, Crescent City, CA; Case No. 11FDN026

**Groundwater Measurements**

WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>MW-3 Continued</b>											
11/27/96	23.40	5.59	---	---	---	---	---	---	---	ND <0.5	---
12/23/96	26.12	2.87	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
1/30/97	26.28	2.71	---	---	---	---	---	---	---	---	---
2/21/97	25.56	3.43	---	---	---	---	---	---	---	---	---
3/20/97	25.56	3.43	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---
4/16/97	24.06	4.93	---	---	---	---	---	---	---	---	---
6/25/97	22.93	6.06	68	ND <50	8.3	7.8	1.6	5.7	ND <5.0	---	---
7/11/97	21.13	7.86	---	---	---	---	---	---	---	---	---
9/11/97	20.13	8.86	ND <50	ND <50	2.8	1.7	0.57	2.02	ND <5.0	---	---
12/15/97	24.42	4.57	ND <50	ND <50	1.3	1.2	0.76	2.52	ND <5.0	---	---
3/5/98	26.33	2.66	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---	---
6/17/98	23.56	5.43	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---	---
9/28/98	19.98	9.01	ND <50	ND <50	3.5	2.7	0.98	3.45	ND <5.0	---	---
12/18/98	25.61	3.38	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---	---
3/5/99	26.16	2.83	160	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	Other oxygenates ND Lead scavengers <200	---
6/3/99	23.96	5.03	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	---	---
6/22/99	23.11	5.88	---	---	---	---	---	---	---	---	---
8/18/99	20.98	8.01	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	---	---
12/12/99	24.38	4.61	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
2/15/00	26.28	2.71	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
5/30/00	24.37	4.62	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
8/29/00	22.25	6.74	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
8/29/00	Method Blank		ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <5.0	1.2	TAME = 19
8/29/00	Field Duplicate		ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
11/8/00	20.84	8.15	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
2/7/01	22.47	6.52	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
4/24/01	22.81	6.18	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	Other oxygenates ND	---
8/8/01	19.96	9.03	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <3.0	TBA = 35	Other oxygenates ND
11/13/01	18.69	10.30	ND <50	ND <50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	Other oxygenates ND	---
11/20/01	20.13	8.86	---	---	---	---	---	---	---	---	---

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

**Groundwater Measurements**

WELL/ Sample Date	Elevation (feet msl)	Groundwater Water (feet)	Depth to Water (feet)	Analytical Results							
				TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )
<b>MW-3 Continued</b>											
12/13/01	24.36	4.63	---	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
2/5/02	25.78	3.21	---	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
<b>5/7/02</b>	<b>23.79</b>	<b>5.20</b>	<b>56</b>	ND <50	ND <170	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
8/14/02	31.99	23.45	8.54	ND <50	ND <170	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
11/12/02	22.51	9.48	ND <50	ND <170	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
5/14/03	27.85	4.14	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
7/16/03	23.97	8.02	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
8/15/03	23.18	8.81	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
11/19/03	28.54	3.45	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
2/9/04	28.54	3.45	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
3/10/04	---	---	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
4/14/04	26.97	5.02	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
5/13/04	23.38	8.61	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
8/26/04	26.48	5.51	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0
10/19/04	28.27	3.72	ND <50	ND <170	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygentes ND
5/12/05	24.87	7.12	ND <50	ND <170	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygentes ND
8/9/05	---	---	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygentes ND
<b>MW-4</b>											
6/22/99	28.21	22.34	5.87	ND <50	<b>85</b>	---	<b>2.0</b>	<b>1.4</b>	ND <0.5	<b>11.1</b>	<b>6,000</b>
8/18/99	20.79	7.42	<b>850</b>	ND <50	---	ND <2.0	ND <2.0	ND <0.5	ND <0.5	ND <0.5	<b>8,400</b>
12/12/99	23.60	4.61	<b>200</b>	ND <50	---	ND <0.5	ND <0.5	ND <0.5	<b>0.53</b>	<b>800</b>	<b>TAME = 72</b>
2/15/00	25.77	2.44	<b>65</b>	ND <50	---	<b>0.57</b>	ND <0.5	ND <0.5	ND <0.5	<b>190</b>	<b>TAME = 11</b>
5/30/00	24.00	4.21	<b>240</b>	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	<b>370</b>	<b>TBA=45</b>
8/29/00	20.73	7.48	<b>1,700</b>	<b>130</b>	---	<b>64</b>	<b>53</b>	<b>25</b>	<b>145</b>	<b>470</b>	<b>TAME = 49</b>
11/8/00	20.31	7.90	<b>1,100</b>	ND <50	---	<b>3.4</b>	<b>5.2</b>	<b>33</b>	<b>65</b>	<b>910</b>	<b>TAME = 98</b>
2/7/01	22.13	6.08	<b>1,000</b>	<b>110</b>	---	<b>2.3</b>	<b>1.3</b>	<b>13</b>	<b>16.5</b>	<b>740</b>	<b>TAME = 240</b>
4/24/01	22.52	5.69	<b>140</b>	ND <50	---	ND <0.5	ND <0.5	<b>0.61</b>	<b>4.2</b>	<b>220</b>	<b>TAME = 61</b>
											Other oxygentes ND
											Other oxygentes ND
											Other oxygentes ND
											Other oxygentes ND
											Other oxygentes ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 11TDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Head Elevation (feet msl)	Water Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
MW-4 Continued												
4/24/01	Field Duplicate	130	---	---	---	---	ND <0.5	ND <0.5	0.56	4.0	210	TBA=28 TAME=14 Other oxygenates ND
8/8/01	20.08	8.13	930	ND <0	---	ND <0.5	ND <0.5	1.6	2.4	1,600	TBA=490 TAME=100 Other oxygenates ND	
11/13/01	18.81	9.40	330	ND <0	---	ND <0.5	ND <0.5	1.6	1.94	420	TBA=26 Other oxygenates ND	
11/20/01	19.84	8.37	---	---	---	---	---	---	---	---	---	
12/13/01	23.83	4.38	---	---	---	---	---	---	---	---	---	
2/5/02	24.53	3.68	ND <0.50	ND <0.50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
5/7/02	23.41	4.80	390	ND <0	ND <170	12	ND <0.50	ND <0.50	0.69	540	TBA=97 TAME=42 Other oxygenates ND	
8/14/02	31.21	23.55	7.66	410	ND <0	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	470	
11/12/02	21.75	9.46	---	ND <0.50	ND <0	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	66	
11/26/02	21.82	9.39	ND <0	ND <50	ND <170	1.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	41	
12/10/02	21.90	9.31	ND <0.50	ND <50	---	0.76	ND <0.50	ND <0.50	ND <0.50	ND <0.50	13	
12/23/02	26.28	4.93	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.2	
1/9/03	27.56	3.65	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
1/3/03	26.01	5.20	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND	
3/12/03	26.97	4.24	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.0	
4/17/03	---	---	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.7	
5/14/03	27.23	3.98	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	5.0	
6/10/03	26.44	4.77	89	ND <0	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	86	
7/16/03	24.91	6.30	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.7	
8/15/03	23.71	7.50	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	11	
9/16/03	22.92	8.29	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.1	
10/15/03	21.94	9.27	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
11/19/03	23.08	8.13	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	12	
12/11/03	25.81	5.40	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
1/14/04	28.18	3.03	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
2/9/04	28.16	3.05	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	
3/10/04	27.91	3.30	ND <0.50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.7	
4/14/04	27.22	3.99	66	ND <0	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	6.6	

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS  
 HP1 / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDRN026

Groundwater Measurements						Analytical Results						
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MIBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
<b>MW-4 Continued</b>												
5/13/04	26.61	4.60	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	11	All oxygentates ND
6/24/04	25.23	5.98	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	7.9	All oxygentates ND
7/27/04	24.30	6.91	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.4	All oxygentates ND
8/26/04	23.69	7.52	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	8.5	All oxygentates ND
9/21/04	23.17	8.04	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	7.7	All oxygentates ND
10/19/04	23.12	8.09	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.3	All oxygentates ND
2/16/05	26.29	4.92	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.4	All oxygentates ND
5/12/05	27.93	3.28	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygentates ND
8/9/05	24.94	6.27	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.7	All oxygentates ND
<b>MW-5</b>												
12/13/01	28.51	24.04	4.47	1,100	ND <50	***	15	ND <0.5	1.0	0.63	1,200	TAME = 110 Other oxygentates ND
2/5/02	25.43	3.08	330	ND <50	***	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	460	TAME = 40 Other oxygentates ND
5/7/02	23.53	4.98	7,100	120	ND <170	360	7.0	170	170	12.3	5,600	TBA = 280 TAME = 620 Other oxygentates ND
8/14/02	31.50	23.24	8.26	25,000	ND <50	ND <170	200	ND <0.50	150	ND <0.50	12,000	TAME = 2,300 Other oxygentates ND
11/12/02	21.69	9.81	2,400	ND <50	***	0.97	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4,700	TAME = 390 TBA = 750 ETBE = 4.7 DIPE = ND<1.0
11/26/02	22.11	9.39	2,400	ND <50	ND <170	2.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4,800	TAME = 260 TBA = 610 ETBE = 16 DIPE = ND<1.0
12/10/02	21.99	9.51	2,000	ND <50	***	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	3,400	TAME = 190 TBA = 760 ETBE = 10 DIPE = ND<1.0 Other oxygentates ND
12/23/02	26.21	5.29	1,100	ND <50	***	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1,600	TAME = 89 TBA = 140 ETBE = 5.6 DIPE = ND<1.0 Other oxygentates ND
1/9/03	27.91	3.59	240	ND <50	***	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	280	TAME = 8.2 TBA = 22 ETBE = 1.8 DIPE = ND<1.0 Other oxygentates ND

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01

1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

**Groundwater Measurements**

Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>MW-5 Continued</b>											
1/30/03	29.06	2.44	71	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	TAME = 3.2
3/12/03	27.91	3.59	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
4/17/03	---	---	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
5/14/03	27.51	3.99	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
6/10/03	26.08	5.42	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
7/16/03	24.34	7.16	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
8/15/03	23.37	8.13	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
9/16/03	22.38	9.12	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
10/15/03	21.79	9.71	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
11/19/03	22.39	9.11	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
12/11/03	25.85	5.65	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
1/14/04	28.45	3.05	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
2/9/04	28.30	3.20	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
3/10/04	28.01	3.49	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
4/14/04	27.03	4.47	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
5/13/04	26.68	4.82	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
6/24/04	24.90	6.60	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
7/27/04	23.88	7.62	51	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	TAME = 2.9
8/26/04	23.11	8.39	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
9/21/04	22.55	8.95	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
10/19/04	22.55	8.95	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
2/16/05	26.01	5.49	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
3/15/05	25.52	5.98	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
5/12/05	27.99	3.51	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
8/9/05	24.63	6.87	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
<b>MW-6</b>											
11/12/02	31.72	21.86	9.86	18,000	260	---	160	690	480	3070	TAME = 400
11/26/02	22.31	9.41	6,400	400	ND <170	30	97	83	660	1,800	Other oxygenates ND
12/10/02	22.01	9.71	6,800	ND <50	---	18	37	28.0	650	2,500	TAME = 260
12/23/02	23.31	8.41	2,300	84	---	2.7	5.5	2.9	121	580	TBA = 150
											Other oxygenates ND
											Other oxygenates ND
											Other oxygenates ND
											Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

Groundwater Measurements				Analytical Results							
WELL/ Sample Date	Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethybenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
MW-6 Continued											
1/9/03	22.76	8.96	2,900	190	—	1.6	3.9	1.4	81	790	TAME = 97 TBA = 470
1/30/03	22.45	9.27	1,900	81	—	1.5	3.4	3.4	77	1,000	Other oxygenates ND TAME = 130 TBA = 290
3/12/03	22.00	9.72	270	ND <50	—	ND <0.5	ND <0.5	ND <0.5	7.7	84	Other oxygenates ND TAME = 11 TBA = 47
4/17/03	22.73	8.99	510	58	—	ND <0.50	1.5	2.2	36	ND <10	Other oxygenates ND All oxygenates ND
5/14/03	27.41	4.31	510	ND <50	—	ND <0.50	1.4	ND <5.0	15.5	ND <5.0	All oxygenates ND
6/10/03	26.16	5.56	1,100	98	—	0.58	3.2	ND <5.0	25	ND <5.0	All oxygenates ND
7/16/03	24.75	6.97	430	ND <50	—	ND <0.50	1.1	ND <5.0	17.2	5.2	All oxygenates ND
8/15/03	23.80	7.92	280	ND <50	—	ND <0.50	0.78	ND <5.0	12	4.5	All oxygenates ND
9/16/03	22.79	8.93	150	ND <50	—	ND <0.50	ND <5.0	ND <5.0	2.5	4.1	All oxygenates ND
10/15/03	22.69	9.03	370	ND <50	—	ND <0.50	0.57	ND <5.0	3.2	ND <10	All oxygenates ND
11/19/03	22.71	9.01	150	ND <50	—	ND <0.50	ND <5.0	ND <5.0	1.4	ND <10	All oxygenates ND
12/11/03	25.01	6.71	470	ND <50	—	ND <0.50	0.78	0.52	8.7	ND <5.0	All oxygenates ND
1/14/04	28.10	3.62	650	ND <50	—	ND <0.50	ND <0.50	0.52	8.0	ND <3.0	All oxygenates ND
2/9/04	27.86	3.86	560	53	—	ND <0.50	ND <0.50	ND <0.50	5.4	ND <8.0	TAME = 1.0 Other oxygenates ND
3/10/04	27.70	4.02	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
4/14/04	26.32	5.40	240	ND <50	—	ND <0.50	ND <0.50	ND <0.50	1.9	ND <1.0	All oxygenates ND
5/13/04	26.31	5.41	370	ND <50	—	ND <0.50	ND <0.50	ND <0.50	1.4	ND <1.0	All oxygenates ND
6/24/04	25.61	6.11	83	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.1	All oxygenates ND
7/27/04	23.17	8.55	130	ND <50	—	ND <0.50	ND <0.50	ND <0.50	1.51	ND <1.0	All oxygenates ND
8/26/04	21.70	10.02	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
9/21/04	22.47	9.25	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
10/19/04	22.47	9.25	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.6	ND <1.0	All oxygenates ND
2/16/05	25.66	6.06	260	ND <50	—	ND <0.50	ND <0.50	ND <0.50	0.54	ND <1.0	All oxygenates ND
5/12/05	26.67	5.05	ND <50	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
8/9/05	24.61	7.11	ND <50	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
<b>MW-7</b>											
11/12/02	31.86	20.90	10.96	5,600	160	—	83	ND <0.5	14	129.9	TAME = 450 TBA = 1,600
11/26/02	22.40	9.46	1,900	ND <50	ND <170	0.90	ND <0.5	0.91	3.05	3,000	Other oxygenates ND TAME = 220 TBA = 380 ETBE = 6.2

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HP1 / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements						Analytical Results						
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
MW-7 Continued												
12/10/02	21.86	10.00	1,600	ND <50	...	28	ND <0.5	7.0	ND <0.5	3,700	TAME = 180 TBA = 360 ETBE = 5.6 Other oxygenates ND	
12/23/02	21.74	10.12	2,900	ND <50	...	0.58	ND <0.5	0.87	0.57	6,000	TAME = 350 TBA = 750 ETBE = 6.1 Other oxygenates ND	
1/9/03	21.51	10.35	3,200	ND <50	...	ND <0.5	ND <0.5	ND <0.5	ND <0.5	6,700	TAME = 330 TBA = 1,000 ETBE = 6.7 Other oxygenates ND	
1/30/03	21.78	10.08	3,000	ND <50	...	ND <0.25	ND <0.25	ND <0.25	ND <0.25	5,400	TAME = 270 TBA = 2,000 ETBE = 6.7 TBF = 2.9 Other oxygenates ND	
3/12/03	21.84	10.02	1,000	ND <50	...	ND <0.25	ND <0.25	ND <0.25	ND <0.25	2,000	TAME = 97 TBA = 31 ETBE = 2.7 Other oxygenates ND	
4/17/03	27.67	4.19	590	ND <50	...	2.1	ND <0.50	ND <0.50	3.1	860	TAME = 47 TBA = 2.0 ETBE = 2.6 Other oxygenates ND	
5/14/03	27.65	4.21	450	ND <50	...	1.4	ND <0.50	0.53	0.82	1,500	TAME = 79 TBA = 2.6 ETBE = 2.6 Other oxygenates ND	
6/10/03	26.66	5.20	200	ND <50	...	0.54	ND <0.50	0.53	ND <0.50	190	TAME = 11 TBA = 11 ETBE = 2.6 Other oxygenates ND	
7/16/03	24.86	7.00	87	ND <50	...	1.6	ND <0.50	ND <0.50	ND <0.50	97	TAME = 4.6 TBA = 4.6 ETBE = 2.6 Other oxygenates ND	
8/15/03	23.98	7.88	130	ND <50	...	ND <0.50	ND <0.50	ND <0.50	ND <0.50	170	TAME = 10 TBA = 10 ETBE = 2.6 Other oxygenates ND	
9/16/03	23.13	8.73	140	ND <50	...	ND <0.50	ND <0.50	ND <0.50	ND <0.50	89	TAME = 4.7 TBA = 4.7 ETBE = 2.6 Other oxygenates ND	
10/15/03	22.47	9.39	230	ND <50	...	2.2	ND <0.50	0.5	ND <0.50	170	TAME = 13 TBA = 13 ETBE = 13 Other oxygenates ND	
11/19/03	22.11	9.75	61	ND <50	...	ND <0.50	ND <0.50	ND <0.50	ND <0.50	28	TAME = 1.7 TBA = 1.7 ETBE = 1.7 Other oxygenates ND	

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
MW-7 Continued												
12/11/03	25.81	6.05	ND<50	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	42	TAME = 2.9 Other oxygenates ND
1/14/04	28.61	3.25	52	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	62	TAME = 4.3 Other oxygenates ND
2/9/04	28.45	3.41	81	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	51	TAME = 3.5 Other oxygenates ND
3/10/04	28.08	3.78	ND>50	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	46	TAME = 2.4 Other oxygenates ND
4/14/04	27.25	4.61	55	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	35	TAME = 2.7 Other oxygenates ND
5/13/04	26.96	4.90	88	ND>50	ND>50	ND>50	1.4	ND<0.50	ND<0.50	ND<0.50	95	TAME = 6.7 Other oxygenates ND
6/24/04	25.29	6.57	180	ND>50	ND>50	ND>50	0.63	ND<0.50	ND<0.50	ND<0.50	190	TAME = 18 Other oxygenates ND
7/27/04	24.28	7.58	120	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140	TAME = 11 Other oxygenates ND
8/26/04	23.49	8.37	170	ND>50	ND>50	ND>50	0.70	ND<0.50	ND<0.50	ND<0.50	170	TAME = 13 Other oxygenates ND
9/21/04	22.91	8.95	270	ND>50	ND>50	ND>50	0.54	ND<0.50	ND<0.50	ND<0.50	280	TAME = 38 Other oxygenates ND
10/19/04	22.78	9.08	65	ND>50	ND>50	ND>50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	90	TAME = 7.0 Other oxygenates ND
2/16/05	26.11	5.75	250	ND>50	ND>50	ND>50	1.6	ND<0.50	ND<0.50	ND<0.50	240	TAME = 38 TBA = 210 Other oxygenates ND
5/12/05	27.87	3.99	ND<50	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.2	All oxygenates ND
8/9/05	24.75	7.11	ND<50	ND<50	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	TAME = 1.6 Other oxygenates ND
<b>MW-8</b>												
11/12/02	31.52	20.21	11.31	2,100	ND<50	ND<50	ND<5	ND<0.5	ND<0.5	ND<0.5	4,300	TAME = 310 TBA = 1,200 ETBE = 14 Other oxygenates ND
11/26/02	19.62	11.90	830	ND<50	ND<170	4.2	ND<0.5	0.92	ND<0.5	ND<0.5	1,200	TAME = 73 TBA = 710 ETBE = 6.0 Other oxygenates ND
12/10/02	17.87	13.65	***	***	***	***	***	***	***	***	***	
12/23/02	22.37	9.15	280	ND<50	ND<50	ND<5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1,300	TAME = 14 ETBE = 3.9 Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements						Analytical Results							
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )	
MW-8 Continued	1/9/03	26.15	5.37	120	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAME=8.5 TBA=56 ETBEE=1.7 Other oxygenates ND	
	1/30/03	27.73	3.79	140	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAME=5.0 TBA=57 ETBEE=2.3 Other oxygenates ND	
3/12/03	24.09	7.43	ND<50	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.8 All oxygenates ND	
4/17/03	27.50	4.02	75	ND<50	ND<50	0.99	0.99	1.7	1.7	3.6	3.6	All oxygenates ND	
5/14/03	26.75	4.77	56	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.8	All oxygenates ND	
6/10/03	26.32	5.20	330	59	ND<50	ND<50	ND<0.50	ND<0.50	9	9	1.0	All oxygenates ND	
7/16/03	23.75	7.77	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND	
8/15/03	22.47	9.05	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND	
9/16/03	21.81	9.71	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.7	All oxygenates ND
10/15/03	20.86	10.66	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.5 All oxygenates ND	
11/19/03	22.85	8.67	96	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND	
12/11/03	25.50	6.02	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.3 All oxygenates ND	
1/14/04	27.34	4.18	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	49 All oxygenates ND	
2/9/04	27.56	3.96	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.7 All oxygenates ND	
3/10/04	27.10	4.42	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0 All oxygenates ND	
4/14/04	27.23	4.29	210	ND<50	---	ND<0.50	ND<0.50	0.66	4.5	4.5	4.5	All oxygenates ND	
5/13/04	26.49	5.03	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	All oxygenates ND	
6/24/04	25.88	5.64	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND>1.0 All oxygenates ND	
7/27/04	23.90	7.62	62	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.7 All oxygenates ND	
8/26/04	23.24	8.28	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.2 All oxygenates ND	
9/21/04	22.64	8.88	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3 All oxygenates ND	
10/19/04	22.65	8.87	ND<50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.6 All oxygenates ND	
2/16/05	25.91	5.61	ND<50	ND<50	220	---	9.3	ND<0.50	32	14	1.8 All oxygenates ND	TAME=1.7	
5/12/05	28.17	3.35	2,200	---	1,500	270	---	1.3	ND<0.50	33	8.1 All other oxygenates ND	ND<2.0 All oxygenates ND	
PZ-1	11/20/01	29.76	20.12	9.64	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	TAME ND<20 Other oxygenates ND	
	12/13/01	24.75	5.01	---	---	---	---	---	---	---	---	---	
	2/5/02	26.43	3.33	---	---	---	---	---	---	---	---	---	
	5/7/02	24.51	5.25	---	---	---	---	---	---	---	---	---	

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS  
HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
1006 N. Highway 101, Crescent City, CA; Case No. IT'DN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Elevation (feet msl)	Well Head Elevation (feet msl)	Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
PZ-1 Continued												
8/14/02	20.96	8.80	ND <50	---	---	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <1.0	Other oxygenates ND
11/12/02	19.53	10.23	---	---	---	---	---	---	---	---	---	---
5/14/03	25.06	4.70	---	---	---	---	---	---	---	---	---	---
7/16/03	22.74	7.02	---	---	---	---	---	---	---	---	---	---
8/15/03	21.57	8.19	---	---	---	---	---	---	---	---	---	---
11/19/03	20.53	9.23	---	---	---	---	---	---	---	---	---	---
2/9/04	26.69	3.07	---	---	---	---	---	---	---	---	---	---
3/10/04	---	---	---	---	---	---	---	---	---	---	---	---
4/14/04	---	---	---	---	---	---	---	---	---	---	---	---
5/13/04	24.73	5.03	---	---	---	---	---	---	---	---	---	---
6/24/04	22.82	6.94	---	---	---	---	---	---	---	---	---	---
8/26/04	20.86	8.90	---	---	---	---	---	---	---	---	---	---
10/19/04	---	---	---	---	---	---	---	---	---	---	---	---
2/16/05	23.91	5.85	---	---	---	---	---	---	---	---	---	---
5/12/05	26.38	3.38	---	---	---	---	---	---	---	---	---	---
8/9/05	22.33	7.43	---	---	---	---	---	---	---	---	---	---
OW-1												
11/20/01	29.64	---	---	---	---	---	---	---	---	---	---	---
2/5/02	24.09	5.55	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
5/7/02	25.53	4.11	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
8/14/02	32.63	24.48	8.15	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
11/12/02	22.98	9.65	---	---	---	---	---	---	---	---	---	---
5/14/03	28.93	3.70	83	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
7/16/03	---	---	---	---	---	---	---	---	---	---	---	---
8/15/03	24.40	8.23	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
11/9/03	23.43	9.20	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
2/9/04	29.21	3.42	ND <50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
3/10/04	---	---	---	---	---	---	---	---	---	---	---	---
4/14/04	---	---	---	---	---	---	---	---	---	---	---	---
5/13/04	27.45	5.18	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	33	Other oxygenates ND
8/26/04	23.72	8.91	50	ND <50	ND <50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	43	Other oxygenates ND
10/19/04	---	---	---	---	---	---	---	---	---	---	---	---
2/16/05	26.98	5.65	---	---	---	---	---	---	---	---	---	---
5/12/05	28.53	4.10	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
8/9/05	25.23	7.40	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PEP, LACO Project No. 5282-01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Elevation (feet msl)	Depth to Water (feet)	Well Head Groundwater (feet msl)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
<b>OW-2</b>												
11/20/01	29.95	---	ND <50	---	---	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	35	TAME=3.2
2/5/02	24.97	4.98	55	ND <50	190	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	25	TAME=2.5
5/7/02	25.03	4.92	---	---	---	---	---	---	---	---	---	Other oxygenates ND
8/14/02	32.43	23.67	8.76	---	---	---	---	---	---	---	---	Other oxygenates ND
11/12/02	22.80	9.63	120	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.2	Other oxygenates ND
5/14/03	28.41	4.02	---	---	---	---	---	---	---	---	---	Other oxygenates ND
7/16/03	---	---	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
8/15/03	24.28	8.15	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
11/19/03	23.34	9.09	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
2/9/04	29.00	3.43	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
3/10/04	---	---	---	---	---	---	---	---	---	---	---	Other oxygenates ND
4/14/04	---	---	---	---	---	---	---	---	---	---	---	Other oxygenates ND
5/13/04	27.29	5.14	58	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	66	Other oxygenates ND
8/26/04	23.54	8.89	93	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	76	Other oxygenates ND
10/19/04	---	---	---	---	---	---	---	---	---	---	---	Other oxygenates ND
2/16/05	26.61	5.82	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
5/12/05	28.25	4.18	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
8/9/05	25.13	7.30	---	---	---	---	---	---	---	---	---	---
<b>OW-3</b>												
11/20/01	28.92	19.94	8.98	---	---	---	---	---	---	---	---	---
2/5/02	24.53	4.39	16,000	410	---	770	830	270	890	5,800	TAME=560	
5/7/02	24.24	4.68	42,000	440	ND <170	1,100	3,200	1,000	4,300	17,000	TBA=1,800	
8/14/02	31.91	23.09	8.82	---	---	---	---	---	---	---	Other oxygenates ND	
11/12/02	21.96	9.95	---	---	---	---	---	---	---	---	---	
11/26/02	---	---	---	---	---	---	---	---	---	---	---	
12/10/02	---	---	---	---	---	---	---	---	---	---	---	

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282-01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1/TDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	Water Elevation (feet msl)	TPHg	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
OW-3 Continued												
12/23/02	26.71	5.20	4,700	51	--	76	96	31	420	2,600	TAME = 240 Other oxygenates ND	
1/9/03	28.34	3.57	2,600	120	--	9.9	17	9.8	150	890	TBA = 1,500 TAME = 94 Other oxygenates ND	
1/30/03	29.21	2.70	4,800	460	--	19	28	41	281	470	TBA = 730 TAME = 52 Other oxygenates ND	
3/12/03	28.73	3.18	5,900	710	--	21	42	56	530	210	TBA = 480 TAME = 28 Other oxygenates ND	
4/17/03	29.30	2.61	4,200	250	--	15	30	53	500	110	TBA = 340 TAME = 18 Other oxygenates ND	
5/14/03	27.90	4.01	1,300	110	--	3.1	2.1	12	57	52	TBA = 140 TAME = 6.8 Other oxygenates ND	
6/10/03	26.74	5.17	2,600	150	--	14	2.5	23	92	150	TBA = 1,900 TAME = 110 Other oxygenates ND	
7/16/03	25.18	6.73	1,900	180	--	8.1	3.2	27	106	490	TBA = 620 TAME = 43 Other oxygenates ND	
8/15/03	24.13	7.78	3,300	--	--	62	51	42	164	1,900	TBA = 1,200 TAME = 220 Other oxygenates ND	
9/16/03	23.28	8.63	4,600	--	--	130	140	50	233	1,200	TBA = 440 TAME = 190 Other oxygenates ND	
10/15/03	22.63	9.28	3,600	--	--	69	85	17	158	720	TBA = 260 TAME = 230 Other oxygenates ND	
11/19/03	23.19	8.72	2,700	--	--	27	39	10	90	530	TBA = 170 TAME = 75 Other oxygenates ND	

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HP / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements						Analytical Results					
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
12/11/03	26.14	5.77	3,600	180	--	49	160	39	272	ND<150	TBA = 57
1/14/04	28.82	3.09	4,300	160	--	35	160	66	540	48	Other oxygenates ND TAME = 18
2/9/04	28.55	3.36	3,700	160	--	6.6	25	18	200	61	Other oxygenates ND TAME = 14
3/10/04	28.21	3.70	2,100	93	--	3.7	18	12	127	28	Other oxygenates ND TBA = 50
4/14/04	27.50	4.41	4,300	150	--	18	52	45	300	96	TAME = 6.7 Other oxygenates ND TBA = 120 TAME = 29
5/13/04	27.07	4.84	3,200	190	--	11	39	36	269	62	Other oxygenates ND TBA = 67 TAME = 17
6/24/04	25.37	6.54	2,300	280	--	27	45	30	262	440	Other oxygenates ND TBA = 1,200 TAME = 100
7/27/04	24.27	7.64	3,400	220	--	53	39	30	203	720	Other oxygenates ND TBA = 1,400 TAME = 140
8/26/04	23.51	8.40	1,500	--	--	26	23	17	187	68	Other oxygenates ND TBA = 41 TAME = 23
9/21/04	22.95	8.96	2,700	--	--	70	73	43	277	180	Other oxygenates ND TAME = 58
10/19/04	22.88	9.03	3,600	1,200	--	74	59	43	620	71	Other oxygenates ND TAME = 35
2/16/05	26.56	5.35	4,100	410	--	24	18	52	440	200	Other oxygenates ND TAME = 77
3/15/05	26.09	5.82	5,300	570	--	20	21	83	920	320	TAME = 85 Other oxygenates ND TBA = 800
5/12/05	28.00	3.91	3,300	130	--	5.3	9.8	16	212	ND<10	TAME = 3.0 Other oxygenates ND
8/9/05	24.99	6.92	2,800	240	--	3.5	6.7	24	297	40	TAME = 15 TBA = 280 Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPL / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Elevation (feet msl)	Groundwater Depth to Well Head Water (feet)	Water (feet msl)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )	MTBE ( $\mu\text{g/l}$ )	Other Analytes ( $\mu\text{g/l}$ )
<b>OW-4</b>											Other oxygenates ND	
11/20/01	28.82	19.70	9.12	...	...	...	...	...	...	...	TAME=110	
2/5/02	25.21	3.61	23,000	1,200	...	480	890	1,500	2,360	820	Other oxygenates ND	
5/7/02	24.47	4.35	30,000	1,200	ND<170	480	520	1,800	3,200	570	TAME=170	
8/14/02	31.79	23.73	8.06	24,000	ND<62	ND<210	240	140	3,100	1,382	Other oxygenates ND	
11/12/02	22.26	9.53	...	...	...	...	...	...	...	...	TAME=24	
11/26/02	---	---	---	---	---	---	---	---	---	---	Other oxygenates ND	
12/10/02	---	---	---	---	---	---	---	---	---	---	TAME=11	
12/23/02	25.95	5.84	560	ND<50	---	ND<0.5	29	22.1	260	260	ETBE=2.8	
1/9/03	27.43	4.36	2,800	590	---	7.6	4	83	86	150	Other oxygenates ND	
1/30/03	28.77	3.02	190	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130	TAME=3.9	
3/12/03	28.42	3.37	1,800	300	---	ND<0.5	ND<0.5	30	27	7.9	TBA=72	
4/17/03	29.25	2.54	2,200	390	---	ND<0.50	0.60	91	90	ND<1.0	Other oxygenates ND	
5/14/03	28.50	3.29	290	ND<50	---	ND<0.50	ND<0.50	3.5	3.7	4.0	Other oxygenates ND	
6/10/03	27.04	4.75	6,400	1,600	---	0.88	2.8	160	182	ND<5.0	Other oxygenates ND	
7/16/03	25.43	6.36	1,900	170	---	ND<0.50	1.3	110	97	ND<1.0	Other oxygenates ND	

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 17TDN026

Groundwater Measurements

WELL/ Sample Date	Well Head (feet msl)	Groundwater Depth to Water (feet)	TPHg ( $\mu\text{g/l}$ )	TPHd ( $\mu\text{g/l}$ )	Analytical Results				
					Benzene ( $\mu\text{g/l}$ )	TPHmo ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethylbenzene ( $\mu\text{g/l}$ )	Xylenes ( $\mu\text{g/l}$ )
<b>OW-4 Continued</b>									
8/15/03	24.41	7.38	560	---	ND<0.50	ND<0.50	47	17	ND<1.0 Other oxygenates ND
9/16/03	---	dry	---	---	---	---	---	---	---
10/15/03	---	dry	---	---	---	---	---	---	---
11/19/03	---	dry	---	---	---	---	---	---	---
12/11/03	25.72	6.07	1,600	270	6.2	0.99	51	38	ND<50 Other oxygenates ND
1/14/04	29.14	2.65	2,000	110	ND<0.50	0.52	100	54	35 Other oxygenates ND
2/9/04	29.03	2.76	2,500	190	ND<0.50	ND<0.50	83	61	ND<4.0 Other oxygenates ND
3/10/04	28.71	3.08	790	80	ND<0.50	ND<0.50	43	20	ND<1.0 Other oxygenates ND
4/14/04	27.69	4.10	4,700	370	ND<0.50	ND<0.50	160	124	ND<1.0 Other oxygenates ND
5/13/04	27.21	4.58	1,500	ND<50	ND<0.50	ND<0.50	81	36	ND<1.0 Other oxygenates ND
6/24/04	24.97	6.82	2,100	160	ND<0.50	1.2	94	47	ND<1.0 Other oxygenates ND
7/27/04	24.34	7.45	2,100	150	ND<0.50	ND<0.50	100	47	2.3 Other oxygenates ND
8/26/04	23.61	8.18	4,000	54	ND<0.50	ND<0.50	57	53	ND<1.0 Other oxygenates ND
9/21/04	---	dry	---	---	---	---	---	---	---
10/19/04	22.98	8.81	500	180	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0 Other oxygenates ND
2/16/05	26.62	5.17	4,100	580	---	3.5	ND<0.50	170	77 ND<1.0 Other oxygenates ND
3/15/05	25.77	6.02	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0 Other oxygenates ND
5/12/05	28.22	3.57	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All oxygenates ND
8/9/05	24.95	6.84	59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All oxygenates ND
<b>OW-5</b>									
11/20/01	28.76	19.63	9.13	---	---	---	---	---	---
2/5/02	25.54	3.22	1,600	110	21	0.7	41	4.8	210 TAME=21 TBA=24
5/7/02	23.70	5.06	6,800	450	ND<170	280	ND<25	480	56 Other oxygenates
8/14/02	31.75	23.52	8.23	---	---	---	---	---	640 TAME=100
11/12/02	22.26	9.49	---	---	---	---	---	---	---
1/9/03	27.78	3.97	390	77	3.5	0.95	1.7	3.5	150 TBA=82 TAME=20 ETBE=1.4
1/30/03	29.22	2.53	3,000	230	4.7	ND<0.50	0.56	0.63	4,400 Other oxygenates ND
3/12/03	28.49	3.26	1,000	120	ND<0.5	ND<0.50	0.94	1,900 TBA=730	TAME=22
4/17/03	27.49	4.26	800	91	8.6	ND<0.50	15	2.0	1,100 TAME=99 TBA=35
									Other oxygenates ND
									Other oxygenates ND

**TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS**  
HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
1006 N. Highway 101, Crescent City, CA, Case No. 1TDN026

Groundwater Measurements							Analytical Results				
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
<b>OW-5 Continued</b>											
5/14/03	26.49	5.26	210	56	---	2.5	ND <0.50	1.7	1.3	440	TAME = 77 Other oxygenates ND
6/10/03	26.70	5.05	450	ND <50	---	11	ND <0.50	1.5	ND <0.5	330	TAME = 25 TBA = 39 Other oxygenates ND
7/16/03	24.89	6.86	170	ND <50	---	2.7	ND <0.50	2.4	ND <0.5	95	TAME = 7.4 TBA = 36 Other oxygenates ND
8/15/03	24.05	7.70	210	---	---	ND <0.50	ND <0.50	ND <0.50	0.51	210	TAME = 14 TBA = 140 Other oxygenates ND
9/16/03	---	dry	---	---	---	---	---	---	---	---	---
10/15/03	---	dry	---	---	---	---	---	---	---	---	---
11/19/03	---	dry	---	---	---	---	---	---	---	---	---
12/11/03	25.85	5.90	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.5	6.7	Other oxygenates ND
1/14/04	28.87	2.88	52	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.5	64	TAME = 1.5 Other oxygenates ND
2/9/04	28.57	3.18	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.4	Other oxygenates ND
3/10/04	28.34	3.41	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.4	Other oxygenates ND
4/14/04	27.54	4.21	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.4	Other oxygenates ND
5/13/04	26.90	4.85	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	Other oxygenates ND
6/24/04	25.22	6.53	ND <50	ND <50	---	0.60	ND <0.50	ND <0.50	ND <0.50	5.5	Other oxygenates ND
7/27/04	24.13	7.62	ND <50	ND <50	---	0.65	ND <0.50	ND <0.50	ND <0.50	18	TAME = 2.2 TBA = 68 Other oxygenates ND
8/26/04	23.53	8.22	57	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	45	TAME = 3.9 Other oxygenates ND
9/21/04	---	dry	---	---	---	---	---	---	---	---	---
10/19/04	23.00	8.75	62	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.3	Other oxygenates ND
2/16/05	26.34	5.41	ND <50	ND <50	---	0.51	ND <0.50	ND <0.50	ND <0.50	4.7	Other oxygenates ND
3/15/05	25.89	5.86	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.5	Other oxygenates ND
5/12/05	28.23	3.52	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	All oxygenates ND
8/9/05	24.90	6.85	ND <50	ND <50	---	ND <0.50	ND <0.50	ND <0.50	ND <0.50	23	TAME = 2.5 Other oxygenates ND
<b>Domestic Well, Totem Motel</b>											
3/20/95	26.27	---	---	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	---	---
6/11/99	---	---	---	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <3.0	---
8/18/99	---	---	---	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <3.0	---
12/12/99	23.37	2.90	ND <50	ND <67	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND	---
2/15/00	---	---	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND	---
5/30/00	---	---	ND <50	ND <50	---	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND	---

TABLE 3: GROUNDWATER ELEVATION DATA AND GROUNDWATER ANALYTICAL RESULTS  
 HPI / Crescent City Shell, PFP, LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. ITDN026

Groundwater Measurements				Analytical Results								
WELL/ Sample Date	Well Head Elevation (feet msl)	Groundwater Depth to Water (feet)	Water (feet msl)	TPH <sup>g</sup> (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Analytes (µg/l)
Domestic Well Continued												
8/29/00	19.07	7.20	ND <50	—	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND
11/8/00	19.27	7.00	ND <50	ND <50	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND
2/7/01	20.96	5.31	ND <50	ND <50	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND
4/24/01	21.26	5.01	ND <50	ND <50	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Other oxygenates ND
8/8/01	—	—	ND <50	ND <50	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	<b>TBA = 60</b> Other oxygenates ND
11/13/01	—	—	ND <50	<b>57</b>	—	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	All oxygenates ND
11/20/01	19.02	7.25	—	—	—	—	—	—	—	—	—	—
2/5/02	24.76	1.51	ND <50	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
5/7/02	21.67	4.60	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
8/14/02	—	—	—	—	—	—	—	—	—	—	—	—
11/12/02	18.03	8.24	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
5/14/03	23.64	2.63	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
11/19/03	18.68	7.59	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
2/9/04	25.04	1.23	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
3/10/04	—	—	—	—	—	—	—	—	—	—	—	—
4/14/04	—	—	—	—	—	—	—	—	—	—	—	—
5/13/04	21.93	4.34	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
8/26/04	18.77	7.50	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
5/12/05	24.34	1.93	ND <50	ND <50	—	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND
8/9/05	20.02	6.25	ND <50	ND <50	ND <170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	All oxygenates ND

#### Trailer Park Domestic Well

5/7/02	—	—	ND <50	ND <50	ND <170	ND <0.50					
8/15/03	—	6.98	ND <50	ND <50	ND <170	ND <0.50					

Reference B.M. - Manhole cover at Harding & Douglas Streets; established by tie to County BM "E-6" (elev. 33.57 ft msl) Elevations set 5/30/95 by Michael Young & Associates, Crescent

**TABLE 4: CHROMIUM ANALYSES RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

WELL/ Sample Date	Total Chromium µg/L	Dissolved Chromium µg/L	Hexavalent Chromium µg/L
<b>MW1</b>			
9/16/03	---	3.9	---
10/15/03	---	ND<10	---
11/19/03	---	ND<10	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	4.9	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	130	ND<10	---
3/15/05	---	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>MW2</b>			
8/15/03	12	ND<10	ND<10
9/16/03	---	35	---
10/15/03	---	26	---
11/19/03	---	57	---
12/11/03	---	22	---
1/14/04	---	23	---
2/9/04	---	18	---
3/10/04	---	25	---
4/14/04	---	29	---
5/13/04	---	31	---
8/26/04	---	40	---
9/21/04	---	56	---
10/19/04	---	48	---
2/16/05	33	25	---
5/12/05	---	21	---
8/9/05	---	35	---
<b>MW4</b>			
8/15/03	190	ND<10	ND<10
9/16/03	---	1.0	---
10/15/03	---	ND<10	---
11/19/03	---	ND<10	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	7.7	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	74	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---

**TABLE 4: CHROMIUM ANALYSES RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

WELL/ Sample Date	Total Chromium µg/L	Dissolved Chromium µg/L	Hexavalent Chromium µg/L
<b>MW5</b>			
8/8/03	---	---	32
8/15/03	67	57	64
9/16/03	---	43	---
10/15/03	---	61	---
11/19/03	---	72	---
12/11/03	---	55	---
1/14/04	---	26	---
2/9/04	---	44	---
3/10/04	---	81	---
4/14/04	---	39	---
5/13/04	---	18	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
3/15/05	---	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>MW6</b>			
9/16/03	---	---	ND<1.0
10/15/03	---	ND<10	---
11/19/03	---	ND<10	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	1.7	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>MW7</b>			
9/16/03	---	---	ND<1.0
10/15/03	---	ND<10	---
11/19/03	---	ND<10	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	1.3	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---

**TABLE 4: CHROMIUM ANALYSES RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

WELL/ Sample Date	Total Chromium µg/L	Dissolved Chromium µg/L	Hexavalent Chromium µg/L
<b>MW8</b>			
8/15/03	65	59	62
9/16/03	---	50	---
10/15/03	---	98	---
11/19/03	---	ND<10	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	260	---
3/10/04	---	480	---
4/14/04	---	120	---
5/13/04	---	56	---
8/26/04	---	ND<10	---
9/21/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>OW3</b>			
9/16/03	---	2.5	---
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	2.4	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	1,600	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
3/15/05	---	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>OW4</b>			
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	1.6	---
3/10/04	---	12	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
3/15/05	---	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---

**TABLE 4: CHROMIUM ANALYSES RESULTS**

HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

WELL/ Sample Date	Total Chromium µg/L	Dissolved Chromium µg/L	Hexavalent Chromium µg/L
<b>OW5</b>			
12/11/03	---	ND<10	---
1/14/04	---	ND<10	---
2/9/04	---	2.2	---
3/10/04	---	ND<10	---
4/14/04	---	ND<10	---
5/13/04	---	ND<10	---
8/26/04	---	ND<10	---
10/19/04	---	ND<10	---
2/16/05	ND<10	ND<10	---
3/15/05	---	ND<10	---
5/12/05	---	ND<10	---
8/9/05	---	ND<10	---
<b>PZ1</b>			
8/8/03	---	---	ND<10
<b>SP3D</b>			
8/15/03	460	400	---
<b>DW</b>			
8/26/04	---	ND<10	---

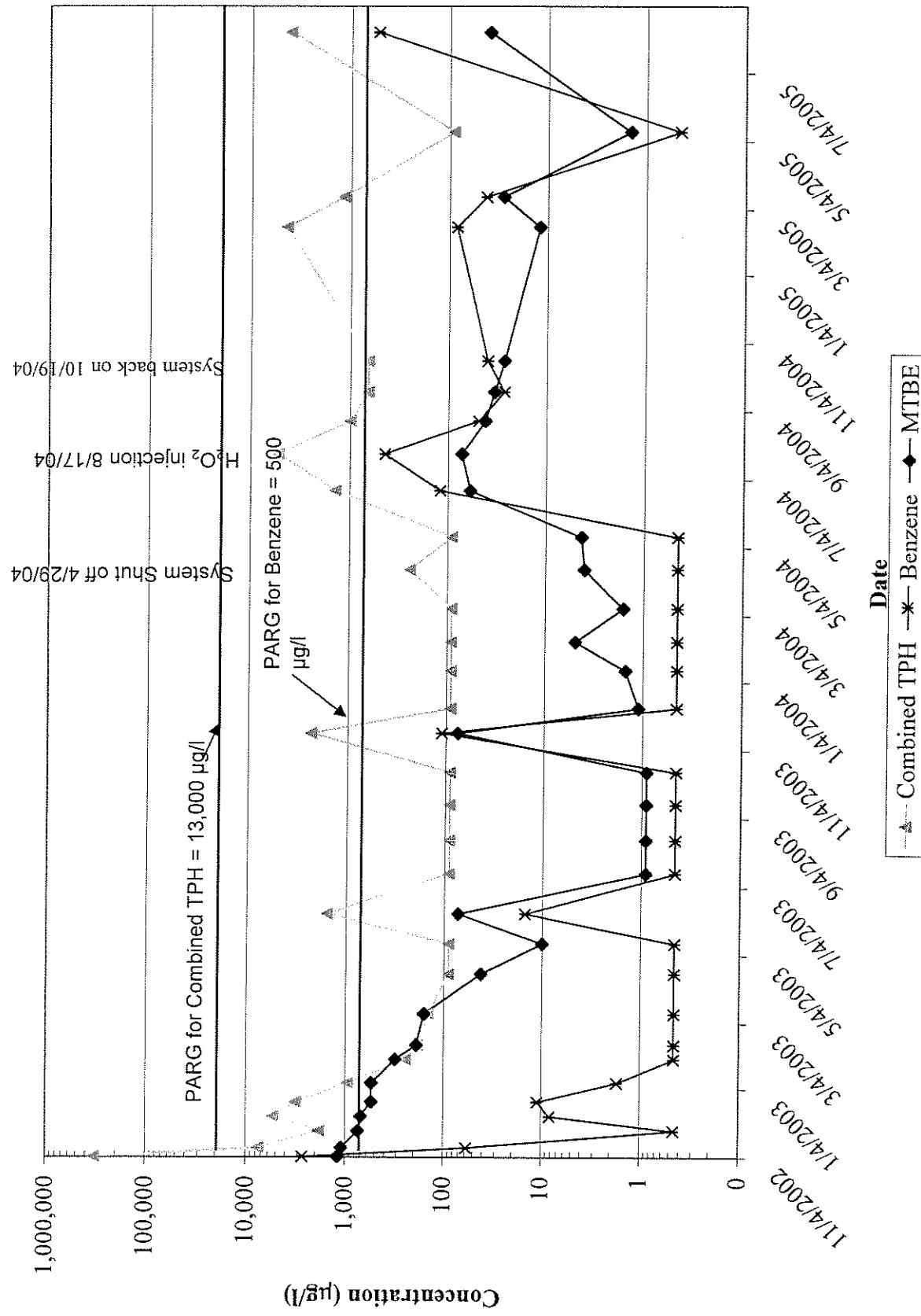
**TABLE 5: RESULTS OF VAPOR SAMPLE ANALYSIS**  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

		Analytical Results					
	Date	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene (ppbv)	m,p-xylene (ppbv)	o-xylene (ppbv)	MTBE (ppbv)
<b>VP-1</b>	<b>11/26/02</b>	8,600	240	26,000	16,000	640	61,000
	<b>2/12/03</b>	---	---	---	---	---	---
	<b>3/12/03</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>6/10/03</b>	ND<18	ND<18	ND<18	ND<18	ND<18	14,000
	<b>9/30/03</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	33
	<b>10/29/03</b>	ND<5.0	8.4	ND<5.0	5.7	ND<5.0	28
	<b>1/28/04</b>	ND<5.0	6.5	ND<5.0	ND<5.0	ND<5.0	21
	<b>2/9/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	15
	<b>5/13/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6.8
	<b>9/21/04</b>	7.3	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6.5
	<b>11/1/04</b>	ND<5.0	7.2	ND<5.0	6.4	ND<5.0	ND<5.0
	<b>2/16/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>5/12/05</b>	---	---	---	---	---	---
	<b>8/9/05</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
<b>VP-2</b>	<b>11/26/02</b>	10,000	120,000	36,000	140,000	36,000	98,000
	<b>2/12/03</b>	ND<5.0	7.3	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>3/12/03</b>	ND<5.0	17	ND<5.0	7.1	7.8	1,800
	<b>6/10/03</b>	ND<20	ND<20	ND<20	ND<20	ND<20	13,000
	<b>9/30/03</b>	ND<5.0	ND<5.0	15	51	ND<5.0	91
	<b>10/29/03</b>	ND<500	ND<500	ND<500	ND<500	ND<500	560
	<b>1/28/04</b>	ND<5.0	9.6	ND<5.0	ND<5.0	ND<5.0	7.1
	<b>2/9/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	23
	<b>5/13/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	45
	<b>9/21/04</b>	ND<5.0	9.2	ND<5.0	ND<5.0	ND<5.0	65
	<b>11/1/04</b>	ND<5.0	5.2	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>2/16/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<10.0
	<b>5/12/05</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	46
	<b>8/9/05</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	27
<b>VP-3</b>	<b>11/26/02</b>	56	660	510	1,800	450	ND<5.0
	<b>2/12/03</b>	ND<5.0	10	ND<5.0	5.5	ND<5.0	ND<5.0
	<b>3/12/03</b>	ND<5.0	6.6	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>6/10/03</b>	ND<5.0	6.3	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>9/30/03</b>	ND<5.0	5.8	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>10/29/03</b>	ND<5.0	8.1	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>1/28/04</b>	---	---	---	---	---	---
	<b>2/9/04</b>	---	---	---	---	---	---
	<b>5/13/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>9/21/04</b>	ND<5.0	5.8	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>11/1/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>2/16/04</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	<b>5/12/05</b>	---	---	---	---	---	---
	<b>8/9/05</b>	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

**TABLE 5: RESULTS OF VAPOR SAMPLE ANALYSIS**  
 HPI / Crescent City Shell, PFP; LACO Project No. 5282.01  
 1006 N. Highway 101, Crescent City, CA; Case No. 1TDN026

		Analytical Results					
	Date	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene (ppbv)	m,p-xylene (ppbv)	o-xylene (ppbv)	MTBE (ppbv)
VP-4	11/26/02	5,800	670	610	1,100	ND<500	ND<500
	2/12/03	ND<5.0	16	ND<5.0	ND<5.0	ND<5.0	5.6
	3/12/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	6/10/03	ND<5.0	7.6	ND<5.0	5.0	ND<5.0	ND<5.0
	9/30/03	ND<5.0	8.5	ND<5.0	6.5	ND<5.0	ND<5.0
	10/29/03	ND<5.0	7.4	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	1/28/04	---	---	---	---	---	---
	2/9/04	---	---	---	---	---	---
	5/13/04	ND<5.0	10	ND<5.0	17	ND<5.0	ND<5.0
	9/21/04	ND<5.0	7.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	11/1/04	ND<5.0	5.6	ND<5.0	5.6	ND<5.0	ND<5.0
	2/16/04	ND<5.0	8.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0
VP-5	5/12/05	---	---	---	---	---	---
	8/9/05	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	11/26/02	25	140	170	450	100	ND<5.0
	2/12/03	ND<5.0	18	ND<5.0	ND<5.0	ND<5.0	6.0
	3/12/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	6/10/03	ND<5.0	6.1	ND<5.0	6.4	ND<5.0	31
	9/30/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/29/03	ND<5.0	6.4	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	1/28/04	---	---	---	---	---	---
	2/9/04	---	---	---	---	---	---
	5/13/04	ND<5.0	5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	9/21/04	ND<5.0	5.2	ND<5.0	ND<5.0	ND<5.0	ND<5.0
VP-6	11/1/04	ND<5.0	5.3	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	2/16/04	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	5/12/05	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	8/9/05	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	11/26/02	ND<5.0	32	30	82	19	17
	2/12/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	3/12/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	6/10/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	9/30/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/29/03	---	---	---	---	---	---
	1/28/04	---	---	---	---	---	---
	2/9/04	---	---	---	---	---	---
	5/13/04	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	9/21/04	ND<5.0	5.4	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	11/1/04	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	2/16/04	ND<5.0	5.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	5/12/05	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	8/9/05	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

**CHART 1: COMBINED TPH, BENZENE, and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-1**  
 PFP Crescent City Shell; LACO No. 5282.01  
 Case No. 1TDN026



**CHART 2: TPH<sub>g</sub>, TPH<sub>d</sub>, BENZENE, and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-2**  
 PFP Crescent City Shell; LACO No. 5282.01  
 Case No. 1TDN026

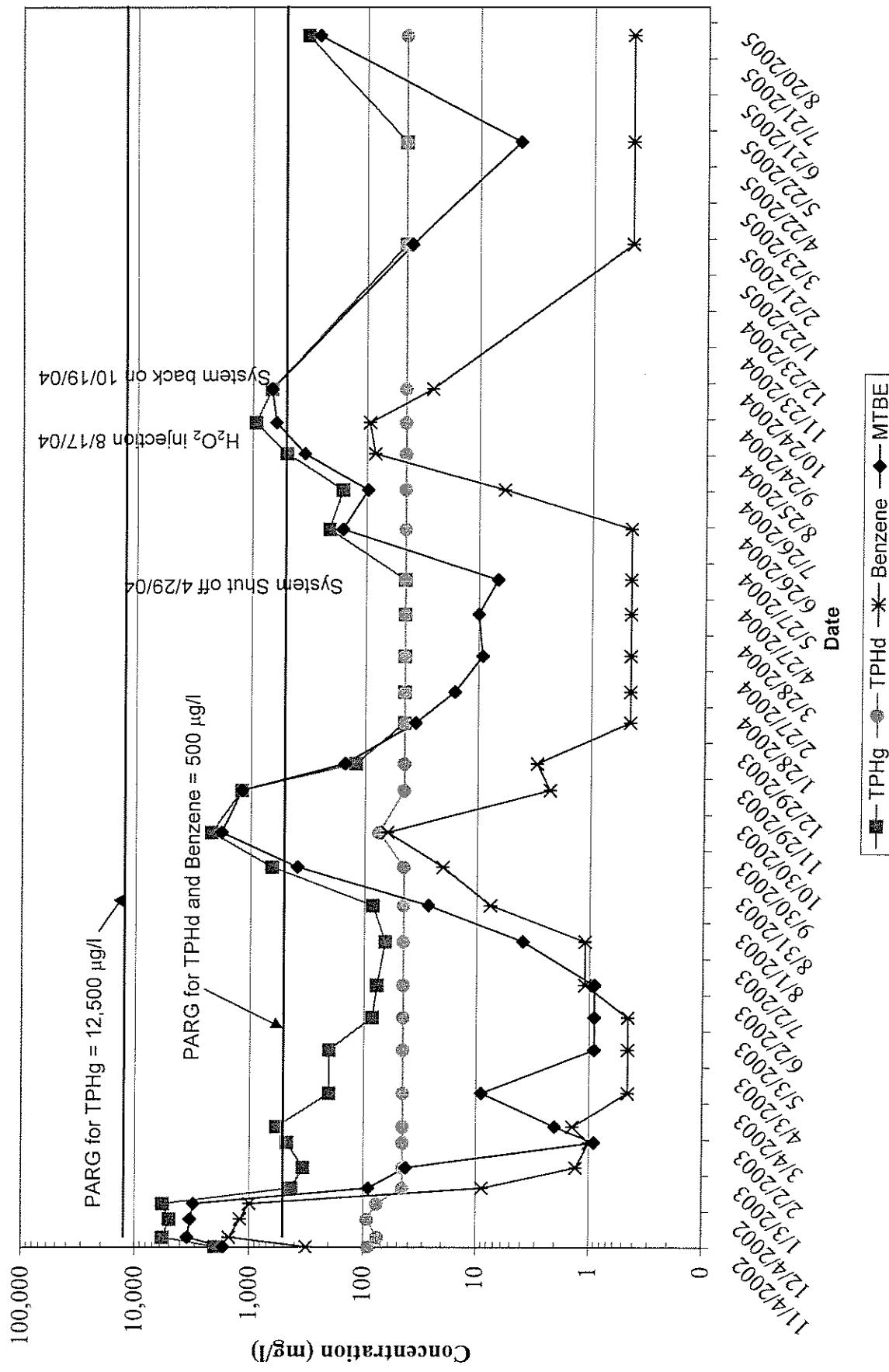
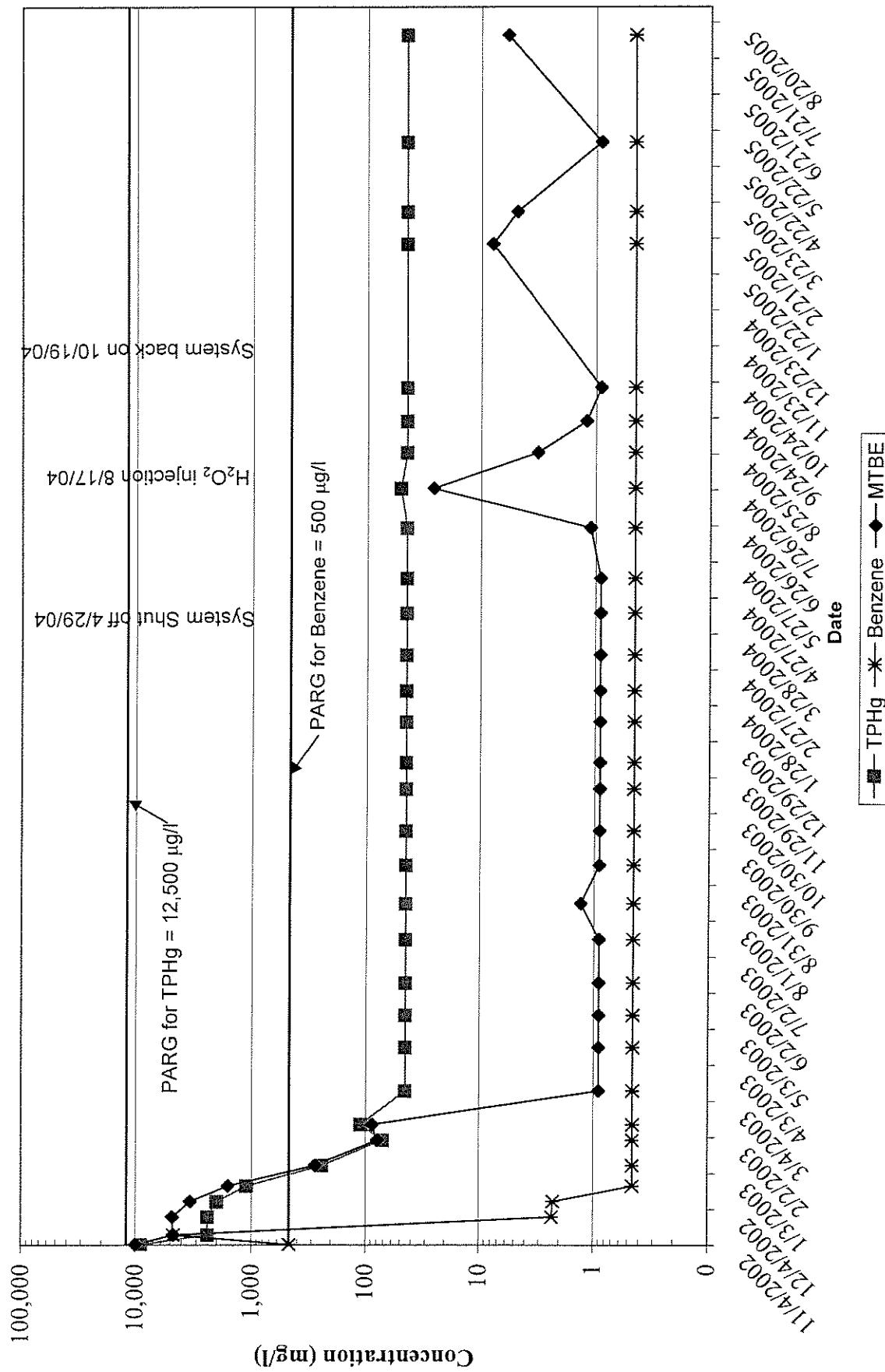
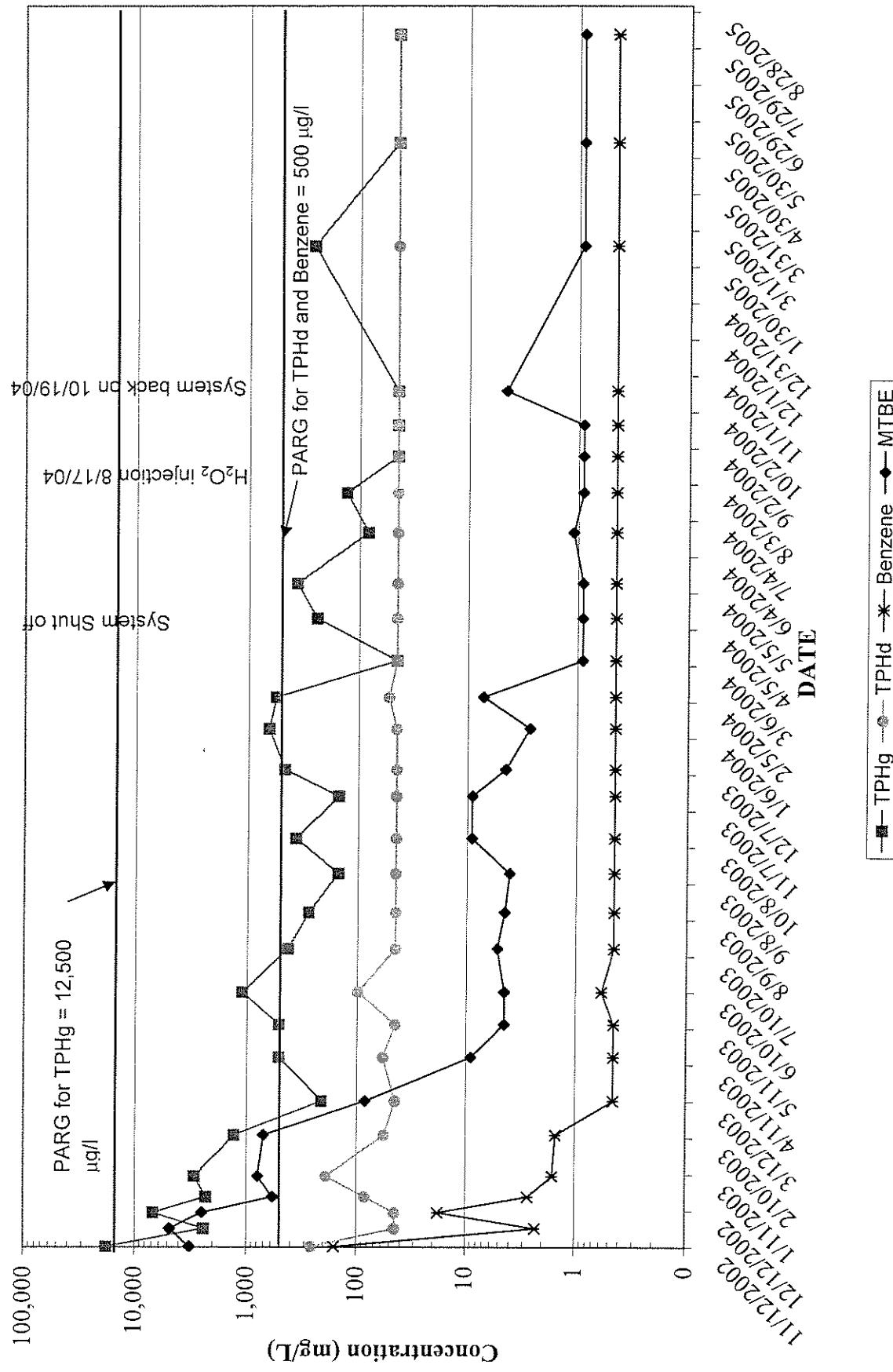


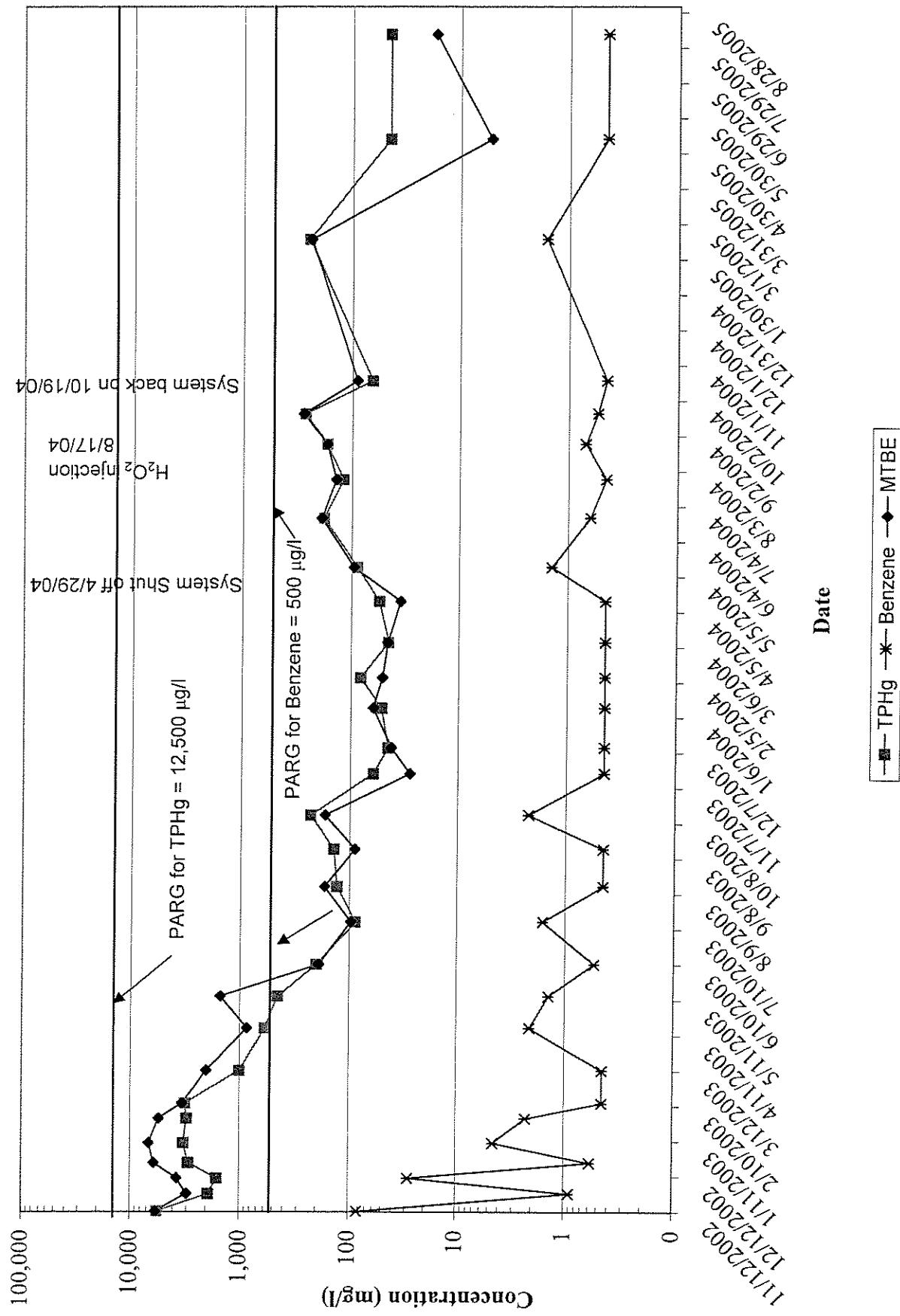
CHART 3: TPHg, BENZENE, and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-5  
 PFP Crescent City Shell; LACO No. 5282.01  
 Case No. 1TDN026



**CHART 4: TPH<sub>g</sub>, TPH<sub>d</sub>, BENZENE, and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-6**  
 PFP Crescent City Shelf; LACO No. 5282.01  
 Case No. ITDN026



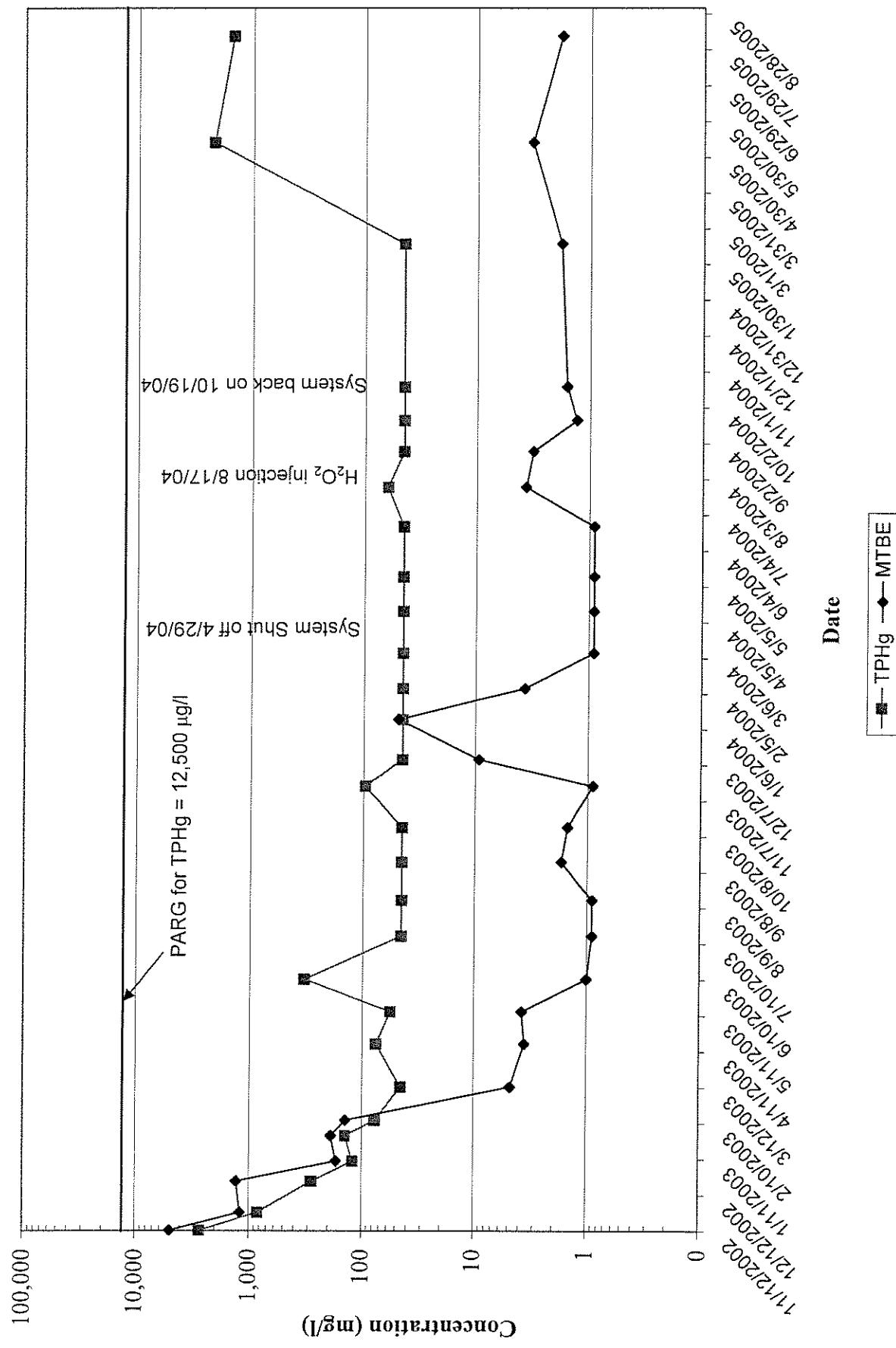
**CHART 5: TPH<sub>g</sub>, BENZENE, and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-7**  
 PFP Crescent City Shell; LACO No. 5282.01  
 Case No. 1TDN026



**CHART 6: TPHg and MTBE CONCENTRATIONS IN GROUNDWATER IN MW-8**

PFP Crescent City Shell; LACO No. 5282.01

Case No. 1TDN026



# **Attachment 1**

ATTACHEMNT 1: KEY TO ABBREVIATIONS

KEY TO ABBREVIATIONS	
Alk	-- Alkalinity
As	-- Arsenic
B	-- Bailer; diameter specified
BTEX	-- Benzene; Toluene; Ethylbenzene; m,p- and o- Xylenes
CAM	-- Cam Pump
Cl	-- Chloride
CO <sub>2</sub>	-- Carbon dioxide
COC	-- Chain of custody
Cr	-- Chromium
DHP	-- Down-hole-pump (submersible pump)
DIPE	-- Di-isopropyl Ether
Dis	-- Dissolved
DO	-- Dissolved Oxygen; accuracy range of the DO meter is ± 0.3 mg/L
DTW	-- Depth-to-Water
ECw	-- Electrical Conductivity in water; accuracy range of the ECw meter is ± 20 µmhos
ETBE	-- Ethyl Tertiary Butyl Ether
Fe	-- Iron
FP	-- Free Product
Mn	-- Manganese
MTBE	-- Methyl Tertiary Butyl Ether
NA	-- Non-accessible
N	-- Nitrogen
ND<50	-- non-detect at reporting limits shown
NO <sub>3</sub>	-- Nitrate
NOT	-- Sample not analyzed for parameter
ACTIVE	-- during current sampling event
ORP	-- Oxidation Reduction Potential; accuracy range of the ORP meter is ± 2 mV
P	-- Phosphorous
PCP/TCP	-- penta- tetra- tri- chlorophenols
pH	-- Potential of hydrogen; accuracy range of the pH meter is ± 0.2 pH
SGC	-- Silica gel cleanup
SO <sub>4</sub>	-- Sulfate
T	-- Temperature; accuracy range of the temperature meter is ± 0.5 °C
T&P	-- Tape and Paste
TAME	-- Tertiary Amyl Methyl Ether
TBA	-- Tertiary Butyl Alcohol
TBF	-- Tertiary Butyl Formate
TIC	-- Total Inorganic Carbon
TOC	-- Total Organic Carbon
Tot	-- Total
TPHd	-- Total Petroleum Hydrocarbons as Diesel
TPHg	-- Total Petroleum Hydrocarbons as Gasoline
TPHk	-- Total Petroleum Hydrocarbons as Kerosene
TPHmo	-- Total Petroleum Hydrocarbons as Motor Oil
TPHs	-- Total Petroleum Hydrocarbons as Solvent
µg/L	-- Micro grams per liter (parts per billion)

# **Attachment 2**

## **PROJECT CHRONOLOGY**

Humboldt Petroleum, Incorporated; Crescent City Shell  
100 North Highway 101, Crescent City, California  
CRWQCB Case No. 1TDN026; LACO Project No. 5282.01

- October 7-11, 2002** Lake's Well Drilling (Lake's) and LACO ASSOCIATES (LACO) installed 16 sparge points in nine sparge wells.
- October 9, 2002** LACO and a representative of the Northern California Regional Water Quality Control Board (NCRWQCB) collected the initial baseline split samples. They were submitted to North Coast Laboratories (NCL) and Alpha Analytical for analysis of the contaminants of concern (COCs).
- October 10-11, 2002** Lake's and LACO installed the first three vapor monitoring points.
- October 11-18, 2002** Julien Construction installed the distribution network and control shed.
- October 11, 2002** Northridge Electrical began the installation of the electrical service to the sparge system.
- October 18, 2002** Northridge Electrical made the final connections of the electrical system and installed the outlets and meter in the control shed.
- November 4, 2002** LACO and a representative of the NCRWQCB collected follow-up split samples of monitoring wells MW1, MW2, and MW5. They were submitted to NCL and Alpha Analytical for analysis. Later in the day, the generator panels were delivered and installed in the shed. The sparge points were connected, a pressure test was performed, and the system was operational.
- November 7, 2002** Lake's and LACO installed three additional monitoring wells, to be paired with the shallow wells OW3 through OW5. These wells were requested by the NCRWQCB following the observation that the shallow wells frequently ran dry in low groundwater months.
- November 8, 2002** Lake's and LACO installed the final three vapor monitoring points.
- November 12, 2002** LACO sampled the newly installed monitoring wells under the observation of a representative of the Del Norte County Department of Environmental Health (DNCDEH), who also observed the operation of the system.
- November 26, 2002** LACO performed a systems check and sample collection. A LACO technician reported Unit 2 station pressures between 10 and 20 pounds per square inch (psi).
- December 8, 2002** LACO performed a systems check. The oxygen booster for Unit 1 was installed and turned on by a LACO technician. The solenoid on Port 8 of Unit 2 was discovered to be intermittently staying open.
- December 10, 2002** LACO performed a systems check and sample collection.
- December 26, 2002** LACO performed a systems check and sample collection. The LACO technician still reported low pressures in Unit 2.

- January 9, 2003** LACO performed a systems check and sample collection. The LACO technician discovered that Unit 1 had been off since the last visit. Unit 1 was turned back on. The oxygen booster for Unit 2 was installed. A crack in the air compressor piston for Unit 2 was discovered. The air compressor was removed and Unit 2 was turned off.
- January 16, 2003** LACO performed a systems check. The LACO technician installed the new air compressor for Unit 2 and turned on the oxygen booster. The pressure in the ports on Unit 2 returned to the normal range (29 to 41 psi).
- January 21, 2003** LACO performed a systems check. LACO discovered the run time clock for Unit 2 had not been working since approximately December 18, 2002. The run time error was caused by an improper setting on the current sensing relay. No problems were discovered with the rest of the system. The current relay was reset to its operational range and the dial was taped in place.
- January 30, 2003** LACO performed a systems check, and LACO and a representative of the NCRWQCB collected split samples for the 25 percent milestone. They were submitted to NCL and Alpha Analytical for analysis of the COCs.
- February 12, 2003** LACO performed a systems check and collected performance monitoring samples. This event coincided with the quarterly sampling for the remainder of the wells associated with this site. Additionally, this event marked the transition to monthly sampling for the Pay-for-Performance (PFP) project wells. While running the pressure test for the ozone panels, the technician noted that Unit 2 was not receiving any power. The run time clock indicated that the short circuit occurred on February 7, 2003.
- February 13, 2003** A LACO senior technician visited the site to diagnose the reason for the lack of power in Unit 2. It was determined that the main power receptacle into the unit had experienced a short circuit. The receptacle was dismantled, and a replacement part was ordered.
- February 14, 2003** LACO technicians replaced the receptacle and performed a pressure test. During the pressure test, tubing into Port 5 of Unit 1 sheared off after being bumped. The damaged section was replaced. The cracked tubing between the backflow valve and the well head connection for sparge point 2S was noticed after an inspection prompted by abnormally high pressure during the Unit 2 pressure test. The section of tubing was replaced and the pressure test proceeded normally. Both units were left up and running.
- March 3-4, 2003** Lake's and LACO installed three continuous core borings to 16 feet below ground surface (bgs) for the collection of soil samples. Hydropunch borings were installed adjacent to each continuous core, with groundwater samples collected from water-bearing zones identified in the continuous cores. Monitoring wells MW6 through MW8 were redeveloped due to anomalous depth-to-water (DTW) readings. The sparge system was shut off during the installations. The crew performed a pressure test at the end of the field activities. All readings were within the normal range.

- March 7, 2003** Humboldt Petroleum, Incorporated (HPI) performed periodic vacuum tests of the vapor recovery system and found that the lines were not holding pressure. It was determined that one of the borings had compromised the vapor recovery line. The station was shut down pending repairs.
- March 10-11, 2003** Beacom Construction began repair of the vapor recovery line. LACO personnel were onsite to monitor activities. A small hole in the vapor recovery line was found to have been caused by the boring installation. It was able to be repaired with a patch and was completely sealed at the end of the first day. The second day was spent performing repairs to the secondary containment system for the product piping lines into the dispensers. The ozone system was shut down at the start of work on March 10, 2003, and restarted at the end of work on March 11, 2003.
- March 12, 2003** LACO performed monthly performance monitoring. An additional round of vapor samples was collected to document any vapor release associated with the breach in the vapor recovery line.
- April 17, 2003** LACO performed monthly performance monitoring. The ozone generator for Unit 1 was noticed to be turned off, apparently since the last site visit. It was also noted that the air compressor in Unit 1 sounded "rough/choppy." The field technician noted that the supply tubing on sparge point SP4S was cracked; this was fixed. It was noted that sparge point SP4D had a leaky backflow valve at the well head; this was replaced. A slight ozone leak from the master panel of Unit 1 was noted, but all connections were tested and found to be tight.
- April 29, 2003** LACO performed a mid-cycle site check to sample vapor points for fugitive ozone using a Dräger pump with an ozone detector tube. LACO arrived on site and found Unit 1 down. The technicians determined the problem to be a shorted out main power switch. The technicians disconnected the switch and called KVA to have a replacement sent out overnight. Ozone concentrations were measured at the port and wellhead of sparge point SP1S, and in vapor points VP1 and VP2. Technicians replaced the air filter on the Unit 2 air compressor, and the particulate filter on the Unit 2 oxygen concentrator.
- May 2, 2003** The Project Manager (PM) arrived on site to replace the main power switch. After replacing the switch, the air compressor was found to be operating at sub-normal pressures. The head was removed from the compressor body and it was discovered that the rubber band around the piston was shredded. KVA was called to have a replacement piston and gasket set shipped. The PM completed the pressure test on Unit 2 and switched out Teflon tubing from two of the unused ports on Unit 2 with two ports that were in use. LACO will use these new lines to monitor the buildup of the discoloration.

<b>May 5, 2003</b>	The PM arrived on site to replace the piston. After taking the air compressor apart to make the repair, LACO noticed that the shaft through which the piston travels was cracked. The PM called KVA for a replacement air compressor.
<b>May 8, 2003</b>	The PM arrived on site to replace air compressor; pressure output was still sub-normal. A soap solution was used to check for leaks and it was found that the seal in the head was not tight. As a gasket set that was shipped out for the previous compressor was not brought, the leak could not be fixed. The system was left off.
<b>May 9, 2003</b>	The senior technician replaced the gasket and ran a pressure test on Unit 1; All pressures were normal.
<b>May 14, 2003</b>	The technicians arrived on site for quarterly monitoring. The technicians performed system checks on both units; all appeared normal and operational.
<b>June 2, 2003</b>	The technician arrived on site for a systems check. Found the GFI on Unit 1 had tripped. Reset the GFI. Run time indicated that the system shut down on May 26, 2003, at 0335.
<b>June 10, 2003</b>	The technicians arrived on site for monthly performance monitoring with vapor monitoring postponed from last month due to pump failure. The technicians found Unit 1 down with a shorted and melted GFI and main power switch. They found that neither unit was grounded. Both units were grounded and shorted parts were replaced. Run times in Unit 1 indicated failure occurred on June 3, 2003, at 2146. Unit was restarted at 1445 on June 10, 2003.
<b>June 15, 2003</b>	The PM arrived on-site to perform systems check on both Units 1 and 2; all appeared normal and operational.
<b>June 24, 2003</b>	The technician arrived on site to perform a system check. Unit 1 appeared normal and operational. Compression fittings on Stations 4 and 5 of Unit 2 were observed to be leaking; the technician replaced compression fittings; all appeared normal and operational.
<b>July 9, 2003</b>	The technician arrived on-site to perform systems check. Several of the ports on Unit 1 were observed to have leaking compression fittings; compression fittings on Stations 2, 4, and 5 were replaced. Compression fittings on Stations 1 and 6 of Unit 1 may still need to be replaced. Nothing unusual was observed on Unit 2. Units were left operational.
<b>July 16, 2003</b>	The technicians arrived on site for monthly performance monitoring. Performed system checks on both units; all appeared operational. The front supports for the Unit 2 compressor were observed to be cracked.
<b>July 22, 2003</b>	A staff geologist and drill crew visited the site to install two soil borings (B15 and B16) adjacent to borings B12 and B13 to assess the possible degradation of sorbed-phase contaminants on site. Soil and respective depth hydro-punch samples were collected from the two borings. A systems check was performed on both units by the staff geologist during

- that visit. The compression fitting for Station 2 on Unit 2 was replaced. All else appeared functional.
- July 28, 2003**
- The technician arrived on site to perform a system check on both Units 1 and 2. The HDPE tubing was not connected from Station 6 to Unit 1, the tubing was re-connected and the unit then appeared fully operational. The compression fitting for Station 8 on Unit 2 was replaced. Nothing else unusual was observed and the units were left operational.
- August 8, 2003**
- The technicians arrived on site to collect groundwater samples to analyze for chromium and replaced the HDPE tubing at the C-Sparger and well heads with Teflon tubing. The HDPE tubing experiencing ozone corrosion was replaced with Teflon and Teflon lined LDPE tubing on Stations 3 and 9 on Unit 1 and Stations 1 to 3 on Unit 2 at the C-Sparger system. The HDPE tubing was replaced with Teflon tubing at well heads 1S to 4S, 6S, 7S, 1D to 3D, and 7D. In addition, the compression fitting on the Unit 1 compressor outflow was replaced.
- August 15, 2003**
- The technicians arrived on site for monthly performance monitoring. A systems check was not performed due to lack of time.
- August 25, 2003**
- The technicians arrived on site to perform a systems operation and maintenance check on Units 1 and 2. The technician noted the top of the main power plug on Unit 1 appeared burnt around the black wire, but the wire appeared fine. The C-Sparger on Unit 2 was non-operational upon arrival and the rain-bird had an error reading on its display. The technician observed the main power switch to the unit was burnt; the technician removed the main power switch and hot wired the unit. The oxygen compressors for both units were turned off. Pressure tests were performed on both units and both units were left running upon departure.
- September 2, 2003**
- The PM and a technician arrived on site to replace the main power switches and associated wiring on both Units 1 and 2. A yellowish, acidic smelling liquid was observed in the Teflon feed tube from the oxygen compressor to the ozone unit on Unit 1; a similar liquid was observed in the pressure release valve, below the ozone unit, on Unit 2. This liquid may be nitric acid, resulting from the passive flow of ambient air through the oxygen booster that had been off since the August 25, 2003, visit. A system pressure test was performed; a leak was observed and noted for Port 8 on Unit 2. The tubing was replaced and both units were left in good condition.
- September 16, 2003**
- The technicians arrived on site for monthly performance monitoring and to perform the systems operation and maintenance check on Units 1 and 2. Both units were fully operational.
- September 30, 2003**
- The technician arrived on site for quarterly monitoring and system check. Found singed wires on the master relay of Unit 1 – unit not operational. The technician removed and cleaned the wire before replacing. A system check was run on both units.

<b>October 10, 2003</b>	The technician arrived on site for the bi-monthly performance monitoring. The master circuit breaker had tripped, which the technician reset. The Unit 1 case fan was non-operational and was replaced.
<b>October 15, 2003</b>	The technicians arrived on site for the monthly performance monitoring and to perform the systems operation and maintenance check on Units 1 and 2. Both units were fully operational.
<b>October 29, 2003</b>	The technicians arrived on site to perform the systems operation and maintenance check on Units 1 and 2. Leaks were discovered in the HDPE lines to Stations 2 and 6 on Unit 1, and Station 4 on Unit 2. Compression fittings were replaced on the three lines. Both units were left in good condition.
<b>November 19, 2003</b>	The technicians arrive on-site to collect quarterly groundwater monitoring samples. A systems check was not performed due to time constraints.
<b>December 11, 2003</b>	The technicians arrived on site to perform the monthly performance monitoring in conjunction with a split sampling event to meet requirements for the 75 percent milestone. Leon Perrault of the DNCDEH collected duplicate samples. In addition, a systems operation and maintenance check was performed on both Units 1 and 2. Unit 1 was not running when the technician arrived; a fuse was found in the off position. A systems check was attempted on Unit 1, but the fuse failed and Unit 1 was left non-operational. The line pressure on Station 8 of Unit 2 was over-range and it was believed that the line might be plugged. Unit 2 was left in good condition and operational.
<b>January 12, 2004</b>	The technicians arrived on site to replace the air compressors on both Units 1 and 2. In addition, a surge protector outlet was installed on each unit. Both units were left in good condition and operational.
<b>January 14, 2004</b>	A LACO technician arrived on site to perform the monthly performance monitoring and the systems operation and maintenance check. Both Units 1 and 2 were fully operational.
<b>January 28, 2004</b>	A LACO technician arrived on site to collect vapor samples from vapor extraction wells VP1 and VP2. Vapor samples were not collected from vapor extraction wells VP3 through VP6 due to the shallow saturated conditions.
<b>February 9, 2004</b>	LACO technicians arrived on site to collect the quarterly groundwater samples. A monthly systems operation and maintenance check was also performed. Both Units 1 and 2 were observed to be operational.
<b>February 25, 2004</b>	The technicians arrived on site to perform the systems operation and maintenance check. Unit 1 was fully operational. The new compressor on Unit 2 was observed to be non-operational. The compressor was removed to be rebuilt as the drive shaft was broken.
<b>February 26, 2004</b>	The technicians arrived on site to replace the compressor. Unit 2 was left in operating condition.
<b>March 10, 2004</b>	LACO technicians arrived on site to collect the monthly groundwater samples.

<b>March 16, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Unit 1 was observed to be operational. Unit 2 was taken off-line to return the failed compressor to the shop.
<b>March 24, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Both Units 1 and 2 were observed to be operational.
<b>April 6, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Both Units 1 and 2 were observed to be operational.
<b>April 14, 2004</b>	The technicians arrived on site to collect the monthly groundwater samples. A systems operation and maintenance check was also performed. Both Units 1 and 2 were observed to be operational.
<b>April 20, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Both Units 1 and 2 were observed to be operational.
<b>April 29, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Both Units 1 and 2 were observed to be operational. System run times were reduced to 1 minute per sparge point in order to test for rebound while keeping the sparge points pressurized.
<b>May 13, 2004</b>	LACO technicians arrive on site to collect quarterly groundwater samples. Vapor samples were collected from vapor extraction wells VP1 through VP6. A systems operation and maintenance check was also performed. Both Units 1 and 2 were observed to be operational.
<b>June 7, 2004</b>	LACO technicians arrived on site to remove the oxygen concentrator and KV sparge panel for Unit 1. Unit 1, Lines 1 through 6, was connected to Unit 2, Lines 1 through 6 (using Kynar tube times 3-Tees). The LACO technicians performed a systems operation and maintenance check. Unit 2 was observed to be operational.
<b>June 24, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Monthly groundwater sampling was also performed. Unit 2 was observed to be operational.
<b>July 27, 2004</b>	LACO technicians arrived on site to perform monthly groundwater sampling.
<b>August 11, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Unit 2 was observed to be operational.
<b>August 17, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Unit 2 was observed to be operational, and the Station 5 solenoid was rebuilt. Additionally, a compressor filter was installed, and a peroxide injection was performed on site.
<b>August 26, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Unit 2 was observed to be operational, and the Station 6 solenoid was rebuilt. Quarterly groundwater sampling was also performed.
<b>September 21, 2004</b>	LACO technicians arrived on site to perform monthly groundwater sampling. Vapor points were also sampled for laboratory analysis.
<b>October 18, 2004</b>	LACO technicians arrived on site to develop observation wells OW3, OW4, and OW5.

<b>October 19, 2004</b>	LACO technicians arrived on site to perform quarterly groundwater sampling. The ozone system was reset to full capacity following rebound of some analytes after the ozone run times were reduced in April.
<b>November 15, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check.
<b>December 13, 2004</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. A gauge was replaced and a fitting was replaced on lower stem No. 2.
<b>January 12, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check.
<b>February 16, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check and quarterly groundwater sampling. Tubing fittings were replaced on Station 7.
<b>March 15, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. The 1207 compressor was completely rebuilt and a new snubber and pressure gauge was added. Additionally, groundwater samples were collected to confirm the air compressor is properly operating.
<b>April 11, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check.
<b>April 14, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check.
<b>May 12, 2005</b>	LACO technicians arrived on site to perform quarterly ground water sampling. Vapor points were also sampled for laboratory analysis.
<b>May 17, 2005</b>	LACO technicians arrived on site to perform a systems operation and maintenance check. Wells MW8 and OW4 were re-developed.
<b>June 16, 2005</b>	LACO technician arrived on site to perform monthly systems operation and maintenance check. Teflon tubing to the back flow valve on Station 2 was replaced, and the solenoid plunger and spring on Station 4 was replaced. Manifold pressures appear to be normal to all stations.
<b>July 14, 2005</b>	LACO technician arrives on site to perform monthly systems operation and maintenance check. Manifold pressures appear normal.
<b>August 9, 2005</b>	LACO technicians arrived on site to perform quarterly ground water sampling. Vapor points were also sampled for laboratory analysis.

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# **Attachment 3**



Project Name: HPI/PFP C.C. Shell  
Project No.: 5282.01  
Date: 8-9-05  
Global ID No.: T0601500022  
PM: CSM

Tech: SJD/RLD  
Mob/Demob time: 125 / 50  
Travel time: 2.25  
Time on site: 7:25  
Time off site: 2:00  
Mileage: 90

	WELL No.:	MW1	MW2	MW4	MW5	MW6
DIAMETER (in)		2.00	2.00	2.00	4.00	1.25
SCREENED INTERVAL (ft)	5-15	5-15	4-14	4-19	10 - 14	
DEPTH TO WATER (ft)	6.17	6.16	6.27	6.87	7.11	
	INITIAL	FINAL	INITIAL	FINAL	INITIAL	FINAL
pH	8.6	7.5			7.5	6.5
TEMP (°C)	16.2	18.4			15.8	17.6
Ecw (μmhos)	477	364			290	269
ORP (mV)	13	21			40	60
DO (mg/L)	1.24	1.02			1.29	0.97
OTHER (units)						
TIME	8:16	8:24			8:47	9:55
METHOD (DHP/CB/B)	DHP				DHP	
RATE (Lpm)	0.25				0.20	
VOLUME (L)	2.00				1.60	
COLOR	TRANS/ BROWN SEMITRANSLUCENT				CLOUDY	CLOUDY
ODOR	WEAK / ORGANIC				NONE	
INTAKE DEPTH (FEET)	10.0				10.0	
TIME	8:26				8:57	
METHOD (DHP/CB/B)	DHP				DHP	
ANALYTICS	8260 List 1; Diss Cr; TPHd w/SGC					
TOTAL DRAWDOWN (FEET)	2.22				1.33	
REMARKS					MB	
WELL CONDITION	good	good	good	good	good	good
WASTE DRUMS						

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED



Project Name: HPI/PFP C.C. Shell  
Project No.: 5282.01  
Date: 8-9-05  
Global ID No.: T0601500022  
PM: CSM

Tech: SJD/RLD  
Mob/Demob time: 25/50  
Travel time: 2.25  
Time on site: 7:25  
Time off site: 2:00  
Mileage: 90

	WELL No.:	MW7	MW8	OW3	OW4	OW5
DIAMETER (in)	1.25	1.25	1.10	1.10	1.10	
SCREENED INTERVAL (ft)	10-15	10-15	5 - 10	5 - 10	5 - 10	
DEPTH TO WATER (ft)	7.4	6.61	6.92	6.84	6.85	
FIELD INTRINSICS						
pH	INITIAL	FINAL	INITIAL	FINAL	INITIAL	FINAL
TEMP (°C)			17.6	19.6	18.0	17.9
Ecw (μmhos)			310	291	275	277
ORP (mV)			-56	-65	-72	-43
DO (mg/L)			1.09	0.25	1.30	0.69
OTHER (units)						
PURGE						
TIME			9:21	9:27	9:42	9:50
METHOD (DHP/CB/B)	CAM PUMP	CAM PUMP	CAM PUMP	CAM PUMP	CAM PUMP	
RATE (Lpm)			0.20		0.20	
VOLUME (L)			1.20		1.20	
COLOR			CLOUDY	CLOUDY	CLOUDY	CLOUDY
ODOR			med.	RUBBER/FUEL	VERY SLIGHT	SWEET
INTAKE DEPTH (FEET)			12(1.0')		9.0	
SAMPLE						
TIME			9:30		9:53	
METHOD (DHP/CB/B)	CAM PUMP			CAM PUMP		
ANALYTES	8260 list 1; Diss. Cr; TPHd w/SGC	8260 List 1; Diss Cr; TPHd w/SGC				
TOTAL DRAWDOWN (FEET)		1.14			1.34	
REMARKS						
WELL CONDITION	good	good	good	good	good	good
WASTE DRUMS						

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED



# **LACO ASSOCIATES**

**CONSULTING ENGINEERS**

21 West Fourth Street, Eureka, CA 95501

TEL 707.443.5054

FAX 707.443.0553

Project Name: HPI/PFP C. CITY SHELL  
Project No.: 5282.01

Tech: SJD  
Date: 8-9-05



Project Name: **HPI/PFP C.C. Shell**  
 Project No.: **5282.01**  
 Date: **7-23-05**  
 Global ID No.: **T0601500022**  
 PM: **CSM**

Tech: **SJD/RLD**  
 Mob/Demob time: **251.50**  
 Travel time: **2.25**  
 Time on site: **7:25**  
 Time off site: **2:00**  
 Mileage: **90**

WELL No.:	MW1	MW2	MW4	MW5	MW6
DIAMETER (in)	2.00	2.00	2.00	4.00	1.25
SCREENED INTERVAL (ft)	5-15	5-15	4-14	4-19	10 - 14
DEPTH TO WATER (ft)					7.11
	INITIAL	FINAL	INITIAL	FINAL	INITIAL
pH		8.01	6.29		6.65
TEMP (°C)		16.0	15.5	16.2	18.8
Ecw (μmhos)		205	190	203	201
ORP (mV)		66	113	115	-52
DO (mg/L)		2.59	2.73	1.16	0.45
OTHER (units)					
	TIME	8:21	8:29	9:17	9:06
PURGE	METHOD (DHP/CB/B)	DHP			CAB
VOLUME (L)	RATE (Lpm)			0.53	0.25
COLOR				2.0	1.5
ODOR				LIGHT OIL	MILD SULFUR
INTAKE DEPTH (FEET)					13.0
SAMPLE	TIME			9:08	11:07
	METHOD (DHP/CB/B)			10:41P	CAB
ANALYTES	8260 List 1; Diss Cr; TPHd w/SGC				
TOTAL DRAWDOWN (FEET)				0.14	6.43
REMARKS					FD
WELL CONDITION				GOOD	GOOD
WASTE DRUMS					

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED



Project Name: HPI/PFP C.C. Shell  
Project No.: 5282.01  
Date: 8-9-05  
Global ID No.: T0601500022  
PM: CSM

Tech: SJD/RLD  
Mob/Demob time: 25/50  
Travel time: 2.25  
Time on site: 7:25  
Time off site: 2:00  
Mileage: 90

WELL No.:	MW7	MW8	OW3	OW4	OW5
DIAMETER (in)	1.25	1.25	1.10	1.10	1.10
SCREENED INTERVAL (ft)	10-15	10-15	5 - 10	5 - 10	5 - 10
DEPTH TO WATER (ft)	7.11		6.92		6.85
	INITIAL FINAL	INITIAL FINAL	INITIAL FINAL	INITIAL FINAL	INITIAL FINAL
pH	6.79 6.80		6.47 6.52		6.62 6.61
TEMP (°C)	16.8 17.3		20.8 20.4		17.3 17.3
E <sub>ew</sub> (μmhos)	300 307		317 291		310 336
ORP (mV)	-51 -41		-57 -68		-52 -53
DO (mg/L)	0.80 0.41		0.54 1.03		1.42 0.49
OTHER (units)	—		—		—
DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING	TIME	10:15 10:23		11:34 11:40	
PURGE	METHOD (DHP/CB/B)	CAM		CAM	CAM
VOLUME (L)	RATE (Lpm)	0.25		0.25	0.25
COLOR	2.0		1.5		2.0
ODOR	CLEAR CLEAR		CLEAR CLEAR		CLEAR CLEAR
INTAKE DEPTH (FEET)	LIGHT SWEET LIGHT SULFUR		MED SHOE STORE		MED SULFUR
SAMPLE	14.0		9.0		9.0
	TIME	10:25		11:42	
	METHOD (DHP/CB/B)	CAM		CAM	CAM
ANALYTES	8260 list 1; Diss. Cr; TPHd w/SGC	8260 List 1; Diss Cr; TPHd w/SGC	8260 List 1; Diss Cr; TPHd w/SGC	8260 List 1; Diss Cr; TPHd w/SGC	8260 List 1; Diss Cr; TPHd w/SGC
TOTAL DRAWDOWN (FEET)	5.79		1.50		0.75
REMARKS	PAINTER WORKING OVERHEAD DURING SAMPLING		PAINTER WORKING ON CANOPY OVERHEAD DURING SAMPLING		PAINTER OVERHEAD DURING SAMPLING
WELL CONDITION	GOOD		GOOD		GOOD
WASTE DRUMS					

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED



# LACO ASSOCIATES

CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501

TEL 707.443.5054

FAX 707.443.0553

Project Name: NTT/RFP CC. SHELL  
Project No.: 5232-21

Tech:

Date: \_\_\_\_\_

WELL ID: MW7

WELL ID: QWS

WELL ID: MW6

WELL ID: 2W3



# LACO ASSOCIATES

CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501

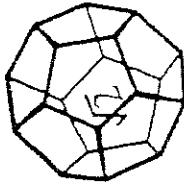
TEL 707.443.5054

FAX 707.443.0553

Project Name: HPI/PFP C.C. SHELL  
Project No.: 5282.01

Tech: SJD/RCD  
Date: 8-7-05

WELL ID: mw1		WELL ID: mw2		WELL ID: mw4		WELL ID: mw5		WELL ID: mw6		WELL ID: mw7	
TIME	DTW (ft)										
7:48	6. <u>42</u>	7:47	6. <u>16</u>	7:50	6. <u>27</u>	7:52	6. <u>87</u>	7:51	7. <u>11</u>	7:54	7. <u>11</u>
8:03	6. <u>42</u>	8:02	6. <u>16</u>	8:05	6. <u>27</u>	8:07	6. <u>87</u>	8:06	7. <u>11</u>	8:09	7. <u>11</u>



NORTH COAST  
LABORATORIES LTD.

56801 Wiegand Road • Arcata • CA 95521-9702  
707.822.1649 FAX 707.822.5311

## Chain of Custody

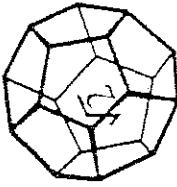
Attention: Accounts Payable  
Results & Invoice to: LACO Associates  
Address: 21 W. 4th St., Eureka, CA 95501  
Phone: (707) 443-5054  
Copies of Report to: LACO; Christine Manhart  
Sampler (Sign & Print): S.D.   
**PROJECT INFORMATION**  
Project Number: 52282.01  
Project Name: HP/PFP CC Shell  
Purchase Order Number: task 3027

\***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S<sub>o</sub>=Soil; O=Other

**NORIHCOAS**  
LABORATORIES LTD.

66600 West End Road • Arcola • CA 95521-9702  
707-822-4649 Fax 707-822-6811

## Chain of Custody



Attention: Accounts Payable \_\_\_\_\_  
Results & Invoice to: LACCO Associates \_\_\_\_\_  
Address: 21 W. 4th St., Eureka, CA 95501 \_\_\_\_\_  
Phone: (707) 443-5034 \_\_\_\_\_  
Copies of Report to: LACCO; Christine Manhart  
  
Sampler (Sign & Print): SJD \_\_\_\_\_  
**PROJECT INFORMATION**  
Project Number: 5282.01  
Project Name: HPM/PFP CC Shell  
Purchase Order Number: TASK 3027

<b>SAMPLE DISPOSAL</b>					
<input checked="" type="checkbox"/> NCL Disposal of Non-Contaminated <input type="checkbox"/> Return		<input checked="" type="checkbox"/> Pickup			
<b>CHAIN OF CUSTODY SEALS Y/N/NA</b>					
<b>SHIPPED VIA:</b> UPS Air-Ex Fed-Ex Bus Hand					

\***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

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## Sample Transportation Notice

**Sample Transportation Notice**

Retaining signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and standards.

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1080 FAX (916) 985-1022

## **CHAIN-OF-CUSTODY RECORD**

Contact Person CHRISTINE MANHART  
Company LACD ASSOCIATES  
Address 21 W. 4TH STREET CITY OF EUREKA  
Phone (707) 443-5054 FAX (707) 443-5054  
  
Collected By: Signature \_\_\_\_\_

**FedEx** US Airbill  
Express

FedEx  
Tracking  
Number

0215

Form  
ID No.  
SAC23  
Sender's  
[Redacted]

From *Please print and press hard.*

Date *8-9-05*

Sender's FedEx  
Account Number

1 222-1316-1

Recipient's  
Name

Phone (707) 443-5054

Company LACO ASSOCIATES

Address 21 W 4TH ST

Dst/Fwd/Spec/Ref/From

City EUREKA

State CA ZIP 95501-0216

Phone (916) 985-1020

Recipient's  
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To Your Internal Billing Reference

For a character who appears on message.

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**LACO ASSOCIATES**21 W. 4th Street  
Eureka, California 95502  
707-443-5054

PROJECT	HPI / C.C. SHELL	BY	SJD	SHEET NO.
LOCATION	(CRESCENT CITY	DATE	8-9-05	
CLIENT		CHECKED		JOB NO.
		DATE		5282.01

# 5282.01

CRESCENT CITY SHELL

8-9-05

## SCOPE: VAPOR SAMPLING

- 12:30 PM - OPEN VP's  
12:39 pm - PURGE VP1 (10 PUMPS)  
12:45 PM - COLLECT SAMPLE VP1  
12:47 PM - PURGE VP2 (10 PUMPS)  
12:49 PM - COLLECT SAMPLE VP2  
12:51 PM - PURGE VP3 (10 PUMPS)  
12:52 PM - COLLECT SAMPLE VP3  
12:55 PM - PURGE VP4 (10 PUMPS)  
12:57 PM - COLLECT SAMPLE VP4  
1:00 PM - PURGE VP5 (10 PUMPS)  
1:03 PM - COLLECT SAMPLE VP5  
1:05 PM - PURGE VP6 (10 PUMPS)  
1:08 PM - COLLECT SAMPLE VP6



Project Name: **Crescent City Shell - HPI**  
 Project No.: **3503.03**  
 Date: **8-9-05**  
 Global ID No.: **T0601500022**  
 PM: **CSM**

Tech: **SJD**  
 Mob/Demob time: **.25/.25**  
 Travel time: **1.25**  
 Time on site: **7:26**  
 Time off site: **2:00**  
 Mileage: **90**

WELL No:	PZ1	OW1	OW2	MW3	DW
DIAMETER (in)	2.00	1.50	0.50	2.00	6.00
SCREENED INTERVAL (ft)	5 - 15	5 - 10	5 - 10	5 - 15	
DEPTH TO WATER (ft)	7.45	7.40	7.30	7.12	6.25
	INITIAL	FINAL	INITIAL	FINAL	INITIAL
pH	6.9	6.6	7.3	7.0↓	7.1
TEMP (°C)	18.3	19.3	17.5	17.8	17.6
E <sub>cm</sub> (μmhos)	183	191	189	187	241
ORP (mV)	54	69	-40	-30↑	-18
DO (mg/L)	3.62	3.28	3.34	2.86↓	5.09
OTHER (units)					
TIME	11:45	11:53	10:17	10:19	10:35
METHOD (DHP/CB/B)	DHP	CAM PUMP	CAM PUMP	DHP	
RATE (Lpm)	0.22	0.25		0.15	0.18
VOLUME (L)	1.75	0.50		1.20	1.75
COLOR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
ODOR	NONE	LIGHT SULFUR	VERY SLIGHT SULFUR	NONE	
INTAKE DEPTH (FEET)	11.0	9.5		9.5	11.0
TIME		10:20		10:47	11:29
METHOD (DHP/CB/B)		CAM PUMP		CAM PUMP	DHP
ANALYTICS	DTW & Field Intrinsics Only	8260 List 1; TPHd/mo w/SGC		8260 List 1; TPHd/mo w/SGC	8260 List 1; TPHd/mo w/SGC
TOTAL DRAWDOWN (FEET)	0.09	2.30		2.02	0.13
REMARKS	UNABLE TO COMPLETE INTRINSICS - WELL NOT RECOVER BACK.				
WELL CONDITION	good	good	good	ONE BOLT HALF TAB BROKEN - OTHER 2 BOLTS STRIPPED	good
WASTE DRUMS					



# **LACO ASSOCIATES**

CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501

TEL 707.443.5054

FAX 707.443.0553

Project Name:

CRESCEANT CITY SHELL - HEP

Tech: SJB

312

Date: 5-9-05

Project No.: 3503.03

WELL ID: mw3

WELL ID: PZI

WELL ID:

WELL ID:





# **LACO ASSOCIATES**

**CONSULTING ENGINEERS**

CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501

TEL 707.443.5054

FAX 707.443.0553

Project Name:

CRESCENT CITY, CALIFORNIA

Project No.: 3503.03

Tech: ZCD

Date: 8-9-65

WELL ID:

WELL ID:

ANSWER

NAME: \_\_\_\_\_



# LACO ASSOCIATES

CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501

TEL 707.443.5054

FAX 707.443.0553

Project Name:

## CRESCEANT CITY SHELL - HPI

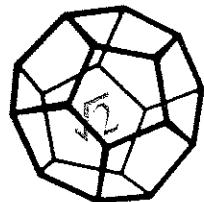
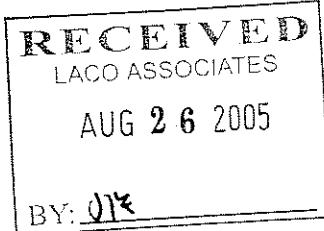
Tech: SJA/EL

Date: 8-9-05

Project No.:

3503.03

# **Attachment 4**



NORTH COAST  
LABORATORIES LTD.

August 24, 2005

LACO Associates  
P.O. Box 1023  
Eureka, CA 95502

Attn: Accounts Payable  
RE: 5282.01, HPI/PFP CC Shell

Order No.: 0508275  
Invoice No.: 52278  
PO No.: TASK 3027  
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

Fraction	Client Sample Description
01A	5282-MW1-W
01D	5282-MW1-W
01E	5282-MW1-W (Dissolved)
02A	5282-MW2-W
02D	5282-MW2-W
02E	5282-MW2-W (Dissolved)
03A	5282-MW4-W
03D	5282-MW4-W
03E	5282-MW4-W (Dissolved)
04A	5282-MW5-W
04D	5282-MW5-W
04E	5282-MW5-W (Dissolved)
05A	5282-MW6-W
05D	5282-MW6-W
05E	5282-MW6-W (Dissolved)
06A	5282-MW7-W
06D	5282-MW7-W
06E	5282-MW7-W (Dissolved)
07A	5282-MW8-W
07D	5282-MW8-W
07E	5282-MW8-W (Dissolved)
08A	5282-OW3-W
08D	5282-OW3-W
08E	5282-OW3-W (Dissolved)
09A	5282-OW4-W
09D	5282-OW4-W
09E	5282-OW4-W (Dissolved)
10A	5282-OW5-W

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

LMO \_\_\_\_\_

DRG \_\_\_\_\_

DNL \_\_\_\_\_

GH \_\_\_\_\_

GEO \_\_\_\_\_

HPI \_\_\_\_\_

CSM \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

File \_\_\_\_\_

Project # \_\_\_\_\_

**REPORT CERTIFIED BY**

Allyn Blackstone (ASR)

Laboratory Supervisor(s)

T. Sheu

QA Unit

Jesse G. Chaney, Jr.

Laboratory Director

August 24, 2005

LACO Associates  
P.O. Box 1023  
Eureka, CA 95502

Order No.: 0508275  
Invoice No.: 52278  
PO TASK 3027  
ELAP No. 1247-Expires July 2006

Attn: Accounts Payable  
RE: 5282.01, HPI/PFP CC Shell

**SAMPLE IDENTIFICATION**

10D	5282-OW5-W
10E	5282-OW5-W (Dissolved)
11A	5282-QCTB
12A	5282-QCMB
13A	5282-QCFD

**CLIENT:** LACO Associates  
**Project:** 5282.01, HPI/PFP CC Shell  
**Lab Order:** 0508275

**CASE NARRATIVE**

All samples submitted for a silica gel cleanup were initially analyzed for diesel. The samples showing no detectable levels of the analyte were not subjected to the cleanup procedure.

**TPH as Diesel with Silica Gel Cleanup:**

Samples 5282-MW1-W, 5282-MW8-W and 5282-OW3-W contain some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights. These samples also contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

**TPH as Diesel:**

The surrogate recoveries for samples 5282-MW5-W and 5282-OW4-W were below the lower acceptance limit. The surrogate recoveries for the quality control samples were within acceptance limits. This indicates that the low surrogate recoveries may be due to matrix effects from the samples.

**Gasoline Components/Additives:**

Sample 5282-OW4-W does not present a peak pattern consistent with that of gasoline. The reported result represents the amount of material in the gasoline range.

Samples 5282-MW1-W, 5282-MW8-W and 5282-OW3-W appear to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.

The gasoline value for sample 5282-MW2-W includes the reported gasoline additives in addition to other peaks in the gasoline range.

Some reporting limits were raised for samples 5282-MW1-W, 5282-MW2-W, 5282-MW8-W and 5282-OW5-W due to matrix interference.

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW1-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-01A      Matrix: Groundwater

Test Name: Gasoline Components/Additives		Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed	
Methyl tert-butyl ether (MTBE)	39	1.0	µg/L	1.0		8/18/05	
Tert-butyl alcohol (TBA)	ND	40	µg/L	1.0		8/18/05	
Di-isopropyl ether (Dipe)	ND	1.0	µg/L	1.0		8/18/05	
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05	
Benzene	530	25	µg/L	50		8/22/05	
Tert-amyl methyl ether (TAME)	44	1.0	µg/L	1.0		8/18/05	
Toluene	56	0.50	µg/L	1.0		8/18/05	
Ethylbenzene	2.2	0.50	µg/L	1.0		8/18/05	
m,p-Xylene	170	25	µg/L	50		8/22/05	
o-Xylene	300	25	µg/L	50		8/22/05	
Surrogate: 1,4-Dichlorobenzene-d4	105	80.8-139	% Rec	1.0		8/18/05	

Test Name: TPH as Gasoline		Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed	
TPHC Gasoline	3,800	50	µg/L	1.0		8/18/05	

Client Sample ID: 5282-MW1-W		Received: 8/9/05      Collected: 8/9/05 0:00					
Lab ID: 0508275-01D      Matrix: Groundwater							
Test Name: TPH as Diesel with Silica Gel Cleanup		Reference: EPA 3510/3630/GCFID(LUFT)/8015B					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed	
TPHC Diesel (C12-C22)	260	50	µg/L	1.0	8/19/05	8/22/05	
Surrogate: N-Tricosane	85.0	70-130	% Rec	1.0	8/19/05	8/22/05	

Client Sample ID: 5282-MW1-W (Dissolved)		Received: 8/9/05      Collected: 8/9/05 0:00					
Lab ID: 0508275-01E      Matrix: Groundwater							
Test Name: ICAP Metals with Acid Digestion		Reference: EPA 200.7					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed	
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05	

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW2-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-02A      Matrix: Groundwater

Test Name: Gasoline Components/Additives

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	260	50	µg/L	50		8/22/05
Tert-butyl alcohol (TBA)	ND	40	µg/L	1.0		8/22/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/22/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/22/05
Benzene	ND	0.50	µg/L	1.0		8/22/05
Tert-amyl methyl ether (TAME)	30	1.0	µg/L	1.0		8/22/05
Toluene	ND	0.50	µg/L	1.0		8/22/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/22/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/22/05
o-Xylene	ND	0.50	µg/L	1.0		8/22/05
Surrogate: 1,4-Dichlorobenzene-d4	103	80.8-139	% Rec	1.0		8/22/05

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	330	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-MW2-W

Received: 8/9/05

Collected: 8/9/05 0:00

Lab ID: 0508275-02D

Matrix: Groundwater

Test Name: TPH as Diesel

Reference: EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	71.8	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-MW2-W (Dissolved)

Received: 8/9/05

Collected: 8/9/05 0:00

Lab ID: 0508275-02E

Matrix: Groundwater

Test Name: ICAP Metals with Acid Digestion

Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	35	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW4-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-03A      Matrix: Groundwater

Test Name: Gasoline Components/Additives      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	4.7	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	0.75	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	102	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-MW4-W      Received: 8/9/05      Collected: 8/9/05 0:00

Lab ID: 0508275-03D      Matrix: Groundwater

Test Name: TPH as Diesel      Reference: EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	79.9	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-MW4-W (Dissolved)      Received: 8/9/05      Collected: 8/9/05 0:00

Lab ID: 0508275-03E      Matrix: Groundwater

Test Name: ICAP Metals with Acid Digestion      Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW5-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-04A      Matrix: Groundwater

Test Name:	Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	5.9	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-MW5-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-04D      Matrix: Groundwater

Test Name:	Reference: EPA 3510/GCFID(LUFT)/EPA 8015B					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	65.6	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-MW5-W (Dissolved)      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-04E      Matrix: Groundwater

Test Name:	Reference: EPA 200.7					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW6-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-05A      Matrix: Groundwater

Test Name:	Gasoline Components/Additives					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	105	80.8-139	% Rec	1.0		8/19/05

Test Name:	TPH as Gasoline					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-MW6-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-05D      Matrix: Groundwater

Test Name:	TPH as Diesel					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	112	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-MW6-W (Dissolved)      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-05E      Matrix: Groundwater

Test Name:	ICAP Metals with Acid Digestion					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-MW7-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-06A      Matrix: Groundwater

Test Name:	Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	17	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	1.6	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	103	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-MW7-W      Received: 8/9/05      Collected: 8/9/05 0:00

Lab ID: 0508275-06D      Matrix: Groundwater

Test Name: TPH as Diesel      Reference: EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	73.6	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-MW7-W (Dissolved)      Received: 8/9/05      Collected: 8/9/05 0:00

Lab ID: 0508275-06E      Matrix: Groundwater

Test Name: ICAP Metals with Acid Digestion      Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

**Client Sample ID:** 5282-MW8-W      **Received:** 8/9/05      **Collected:** 8/9/05 0:00  
**Lab ID:** 0508275-07A      **Matrix:** Groundwater

**Test Name:** Gasoline Components/Additives

**Reference:** LUFT/EPA 8260B Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Methyl tert-butyl ether (MTBE)	ND	2.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	1.3	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	33	0.50	µg/L	1.0		8/19/05
m,p-Xylene	8.1	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	106	80.8-139	% Rec	1.0		8/19/05

**Test Name:** TPH as Gasoline

**Reference:** LUFT/EPA 8260B Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Gasoline	1,500	50	µg/L	1.0		8/19/05

**Client Sample ID:** 5282-MW8-W

**Received:** 8/9/05

**Collected:** 8/9/05 0:00

**Lab ID:** 0508275-07D

**Matrix:** Groundwater

**Test Name:** TPH as Diesel with Silica Gel Cleanup

**Reference:** EPA 3510/3630/GCFID(LUFT)/8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	270	50	µg/L	1.0	8/19/05	8/22/05
Surrogate: N-Tricosane	71.1	70-130	% Rec	1.0	8/19/05	8/22/05

**Client Sample ID:** 5282-MW8-W (Dissolved)

**Received:** 8/9/05

**Collected:** 8/9/05 0:00

**Lab ID:** 0508275-07E

**Matrix:** Groundwater

**Test Name:** ICAP Metals with Acid Digestion

**Reference:** EPA 200.7

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-OW3-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-08A      Matrix: Groundwater

Test Name: Gasoline Components/Additives

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	40	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	280	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	3.5	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	15	1.0	µg/L	1.0		8/19/05
Toluene	6.7	0.50	µg/L	1.0		8/19/05
Ethylbenzene	24	0.50	µg/L	1.0		8/19/05
m,p-Xylene	200	0.50	µg/L	1.0		8/19/05
o-Xylene	97	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	103	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	2,800	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-OW3-W

Received: 8/9/05

Collected: 8/9/05 0:00

Lab ID: 0508275-08D

Matrix: Groundwater

Test Name: TPH as Diesel with Silica Gel Cleanup

Reference: EPA 3510/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	240	50	µg/L	1.0	8/19/05	8/22/05
Surrogate: N-Tricosane	70.3	70-130	% Rec	1.0	8/19/05	8/22/05

Client Sample ID: 5282-OW3-W (Dissolved)

Received: 8/9/05

Collected: 8/9/05 0:00

Lab ID: 0508275-08E

Matrix: Groundwater

Test Name: ICAP Metals with Acid Digestion

Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-OW4-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-09A      Matrix: Groundwater

Test Name:	Gasoline Components/Additives					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DiPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	104	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	59	50	µg/L	1.0		8/19/05

Client Sample ID: 5282-OW4-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-09D      Matrix: Groundwater

Test Name: TPH as Diesel      Reference: EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	66.8	70-130	% Rec	1.0	8/16/05	8/16/05

Client Sample ID: 5282-OW4-W (Dissolved)      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508275-09E      Matrix: Groundwater

Test Name: ICAP Metals with Acid Digestion      Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

**Client Sample ID:** 5282-OW5-W      **Received:** 8/9/05      **Collected:** 8/9/05 0:00  
**Lab ID:** 0508275-10A      **Matrix:** Groundwater

**Test Name:** Gasoline Components/Additives

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Methyl tert-butyl ether (MTBE)	23	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	20	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	2.5	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	102	80.8-139	% Rec	1.0		8/19/05

**Test Name:** TPH as Gasoline

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

**Client Sample ID:** 5282-OW5-W

**Lab ID:** 0508275-10D      **Matrix:** Groundwater

**Test Name:** TPH as Diesel

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/16/05
Surrogate: N-Tricosane	85.0	70-130	% Rec	1.0	8/16/05	8/16/05

**Client Sample ID:** 5282-OW5-W (Dissolved)

**Lab ID:** 0508275-10E      **Matrix:** Groundwater

**Test Name:** ICAP Metals with Acid Digestion

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chromium	ND	10	µg/L	1.0	8/9/05	8/11/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-QCTB Received: 8/9/05 Collected: 8/9/05 0:00  
Lab ID: 0508275-11A Matrix: Trip Blank

Test Name:	Gasoline Components/Additives Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
o-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/18/05

Test Name: TPH as Gasoline Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/18/05

Client Sample ID: 5282-QCMB Received: 8/9/05 Collected: 8/9/05 0:00

Lab ID: 0508275-12A Matrix: Groundwater

Test Name:	Gasoline Components/Additives Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	102	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

Date: 24-Aug-05  
WorkOrder: 0508275

## ANALYTICAL REPORT

Client Sample ID: 5282-QCFD Received: 8/9/05 Collected: 8/9/05 0:00  
Lab ID: 0508275-13A Matrix: Groundwater

Test Name: Gasoline Components/Additives

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/19/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/19/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/19/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/19/05
Benzene	ND	0.50	µg/L	1.0		8/19/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/19/05
Toluene	ND	0.50	µg/L	1.0		8/19/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/19/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/19/05
o-Xylene	ND	0.50	µg/L	1.0		8/19/05
Surrogate: 1,4-Dichlorobenzene-d4	105	80.8-139	% Rec	1.0		8/19/05

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/19/05

# North Coast Laboratories, Ltd.

Date: 24-Aug-05

**CLIENT:** LACO Associates  
**Work Order:** 0508275  
**Project:** 5282.01, HPI/PFP CC Shell

## QC SUMMARY REPORT

Method Blank

Sample ID	MB-818/05	Batch ID: R36500	Test Code: 82600XYW	Units: µg/L	Analysis Date	8/18/05 8:59:00 AM	Prep Date				
Client ID:		Run ID:	ORGCMSS3_050818B		SeqNo:	525337					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0									
Ter-t-butyl alcohol (TBA)	ND	1.0									
Di-isopropyl ether (DPE)	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
Benzene	ND	0.50									
Tert-amyI methyl ether (TAME)	ND	1.0									
Toluene	ND	0.50									
Ethylbenzene	0.1125	0.50									J
m,p-Xylene	0.2370	0.50									J
o-Xylene	0.1373	0.50									J
1,4-Dichlorobenzene-d4	1.02	0.10	1.00	0	102%	81	139	0			
Sample ID	MB-818/05	Batch ID: R36475	Test Code: GASWMS	Units: µg/L	Analysis Date	8/18/05 8:59:00 AM	Prep Date				
Client ID:		Run ID:	ORGCMSS3_050818A		SeqNo:	525337					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	20.10	50									J
Sample ID	MB-13995P	Batch ID: 13995	Test Code: ICNX	Units: µg/L	Analysis Date	8/11/05 7:03:00 PM	Prep Date				
Client ID:		Run ID:	INICP1_050811B		SeqNo:	522649					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	10									

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## QC SUMMARY REPORT

Method Blank

CLIENT: LACO Associates  
Work Order: 0508275  
Project: 5282.01, HPI/PFP CC Shell

Sample ID	Batch ID:	Test Code:	Run ID:	Analysis Date	Prep Date
Client ID:		SGT	HDW	8/22/05 11:18:03 AM	8/19/05
Analyte		ORGC5_050822A		SeqNo:	525370
TPHC Diesel (C12-C22)	ND	50			
N-Tricosane	44.2	0.10	50.0	0	88.5%
				70	130
				0	
Sample ID	Batch ID:	Test Code:	Run ID:	Analysis Date	Prep Date
Client ID:		TPHDIW	ORGC7_050816A	8/16/05 5:54:06 PM	8/16/05
Analyte		SPK	Ref Val	SeqNo:	524297
TPHC Diesel (C12-C22)	ND	50			
N-Tricosane	38.7	0.10	50.0	0	77.4%
				70	130
				0	

Qualifiers:

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## North Coast Laboratories, Ltd.

Date: 24-Aug-05

**CLIENT:** LACO Associates  
**Work Order:** 0508275  
**Project:** 5282.01, HPI/PFP CC Shell

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID LCS-05528		Batch ID: R36500		Test Code: 82600XXW		Units: µg/L		Analysis Date: 8/18/05 5:35:00 AM		Prep Date					
Client ID:		Run ID:	ORGCMSS_050818B	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	18.34	1.0	20.0	0	91.7%	80	120	0							
Tert-butyl alcohol (TBA)	372.3	10	400	0	93.1%	25	162	0							
Di-isopropyl ether (DIPE)	18.75	1.0	20.0	0	93.8%	80	120	0							
Ethyl tert-butyl ether (ETBE)	18.54	1.0	20.0	0	92.7%	77	120	0							
Benzene	19.10	0.50	20.0	0	95.5%	78	117	0							
Tert-amyl methyl ether (TAME)	18.11	1.0	20.0	0	90.5%	64	136	0							
Toluene	19.44	0.50	20.0	0	97.2%	80	120	0							
Ethylbenzene	18.71	0.50	20.0	0	93.5%	80	120	0							
m,p-Xylene	38.05	0.50	40.0	0	95.1%	80	120	0							
o-Xylene	18.87	0.50	20.0	0	94.3%	80	120	0							
1,4-Dichlorobenzene-d4	1.08	0.10	1.00	0	108%	81	139	0							
Sample ID LCSD-05528		Batch ID: R36500		Test Code: 82600XXW		Units: µg/L		Analysis Date: 8/18/05 6:01:00 AM		Prep Date					
Client ID:		Run ID:	ORGCMSS_050818B	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	18.29	1.0	20.0	0	91.5%	80	120	18.3	0.269%	20					
Tert-butyl alcohol (TBA)	373.3	10	400	0	93.3%	25	162	372	0.263%	20					
Di-isopropyl ether (DIPE)	18.85	1.0	20.0	0	94.3%	80	120	18.8	0.537%	20					
Ethyl tert-butyl ether (ETBE)	18.56	1.0	20.0	0	92.8%	77	120	18.5	0.107%	20					
Benzene	19.49	0.50	20.0	0	97.4%	78	117	19.1	2.04%	20					
Tert-amyl methyl ether (TAME)	18.29	1.0	20.0	0	91.4%	64	136	18.1	0.975%	20					
Toluene	19.60	0.50	20.0	0	98.0%	80	120	19.4	0.82%	20					
Ethylbenzene	19.00	0.50	20.0	0	95.0%	80	120	18.7	1.55%	20					
m,p-Xylene	38.85	0.50	40.0	0	97.1%	80	120	38.0	2.08%	20					
o-Xylene	19.09	0.50	20.0	0	95.5%	80	120	18.9	1.21%	20					
1,4-Dichlorobenzene-d4	1.07	0.10	1.00	0	107%	81	139	1.08	1.17%	20					

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**CLIENT:** LACO Associates  
**Work Order:** 0508275  
**Project:** 5282.01, HPI/PFP CC Shell

**QC SUMMARY REPORT**  
Laboratory Control Spike

Sample ID	LCS-05529	Batch ID:	R36475	Test Code:	GASW-MS	Units:	µg/L	Analysis Date	8/18/05 7:17:00 AM	Prep Date
Client ID:				Run ID:	ORGCMSS3_050818A			SeqNo:	525034	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
TPHC Gasoline		933.8	50	1,000	0	93.4%	80	120	0	
Sample ID	LCSD-05529	Batch ID:	R36475	Test Code:	GASW-MS	Units:	µg/L	Analysis Date	8/18/05 7:43:00 AM	Prep Date
Client ID:				Run ID:	ORGCMSS3_050818A			SeqNo:	525035	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
TPHC Gasoline		929.9	50	1,000	0	93.0%	80	120	934	0.426%
										20
Sample ID	LCS-13995P	Batch ID:	13995	Test Code:	ICPX	Units:	µg/L	Analysis Date	8/11/05 7:06:00 PM	Prep Date
Client ID:				Run ID:	INICP1_050811B			SeqNo:	522650	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
Chromium		465.7	10	500	0	93.1%	85	115	0	
Sample ID	LCS-14056	Batch ID:	14056	Test Code:	SGTPHDW	Units:	µg/L	Analysis Date	8/22/05 9:54:41 AM	Prep Date
Client ID:				Run ID:	ORGС5_050822A			SeqNo:	525368	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
TPHC Diesel (C12-C22)		386.0	50	500	0	77.2%	40	107	0	
N-Tricosane		50.5	0.10	50.0	0	101%	70	130	0	
Sample ID	LCSD-14056	Batch ID:	14056	Test Code:	SGTPHDW	Units:	µg/L	Analysis Date	8/22/05 10:22:33 AM	Prep Date
Client ID:				Run ID:	ORGС5_050822A			SeqNo:	525369	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
TPHC Diesel (C12-C22)		394.5	50	500	0	78.9%	40	107	386	2.17%
N-Tricosane		50.7	0.10	50.0	0	101%	70	130	50.5	0.305%
										15

**Qualifiers:**

J - Analyte detected below quantitation limits  
ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** LACO Associates  
**Work Order:** 0508275  
**Project:** 5282.01, HPI/PFP CC Shell

## QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	Batch ID:	Test ID:	Test Code:	Units:	Analysis Date	Prep Date					
Client ID:		Run ID:	ORG C7_050816A	µg/L	8/16/05 3:50:19 PM	8/16/05					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	560.8	50	500	0	110%	67	120	0	0	0	
N-Tricosane	51.6	0.10	50.0	0	103%	70	130	0	0	0	
Sample ID	Batch ID:	Test ID:	Test Code:	Units:	Analysis Date	Prep Date					
Client ID:		Run ID:	ORG C7_050816A	µg/L	8/16/05 4:09:54 PM	8/16/05					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	549.5	50	500	0	110%	67	120	551	0.232%	15	
N-Tricosane	51.0	0.10	50.0	0	102%	70	130	51.6	1.03%	15	

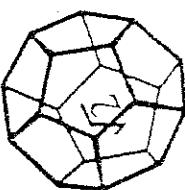
Qualifiers:

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



NORTH COAST  
LABORATORIES LTD.

GRADWELL Road - Acata - CA 95521-9702  
707-827-4649 fax 707-827-4641

## Chain of Custody

Attention: Accounts Payable	Results & Invoice to: LACO Associates	Address: 21 W. 4th St., Eureka, CA 95501	Phone: (707) 443-5054	Copies of Report to: LACO; Christine Manhart	Sampler (Sign & Print): SID			
<p style="text-align: center;"><b>PROJECT INFORMATION</b></p> <table border="1"> <tr> <td>Project Number: 5282.01</td> <td>Project Name: HPLPFP CC Shell</td> <td>Purchase Order Number: task 3027</td> </tr> </table>						Project Number: 5282.01	Project Name: HPLPFP CC Shell	Purchase Order Number: task 3027
Project Number: 5282.01	Project Name: HPLPFP CC Shell	Purchase Order Number: task 3027						
AB ID	SAMPLE ID	DATE	TIME	MATRIX*				
	5282-MW1-W	8-9-03	AM	GW				
	5282-MW2-W							
	5282-MW4-W							
	5282-MW5-W							
	5282-MW6-W							
	5282-MW7-W							
	5282-MW8-W							
	5282-OW3-W							
	5282-OW4-W							

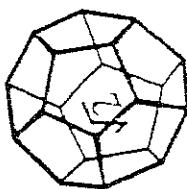
LABORATORY NUMBER:		1124 Hr		1148 Hr		115 Day		115-7 Day	
<input checked="" type="checkbox"/> STD (2-3 Wk)		<input type="checkbox"/> Other: _____							
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES									
REPORTING REQUIREMENTS:		State Forms:							
Preliminary:	<input checked="" type="checkbox"/>	Verbal		By:	_____				
Final Report:	<input type="checkbox"/>	Verbal		By:	_____				
CONTAINER CODES: 1—1/2 gal. pt; 2—250 ml pt; 3—500 ml pt; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L CG; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other									
PRESERVATIVE CODES: a—HNO <sub>3</sub> ; b—HCl; c—H <sub>2</sub> SO <sub>4</sub> ; d—Na <sub>2</sub> SO <sub>4</sub> ; e—NaOH; f—C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> C <sub>2</sub> H <sub>5</sub> ; g—other									
SAMPLE CONDITION/SPECIAL INSTRUCTIONS									
GEOTRACKER									
<input type="checkbox"/> NCL Disposal of Non-Contaminated <input type="checkbox"/> Return									
<input type="checkbox"/> Pickup									
<input type="checkbox"/> Hand									
SAMPLE DISPOSAL									
<input type="checkbox"/> UPS Air-Ex Fed-Ex Bus									
CHAIN OF CUSTODY SEALS Y/N/NA									
SHIPPED VIA:									

$E_{ff}$ =Effluent;  $Inf$ =Influent;  $SW$ =Surface Water;  $GW$ =Ground Water;  $S$ =Soil;  $O$ =Other.

## Chain of Custody

**NORTH COAST  
LABORATORIES LTD.**

10000 West End Road • Acosta • GA 30551 (901) 762-2700 [Fax] 762-2701



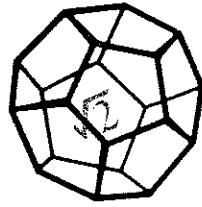
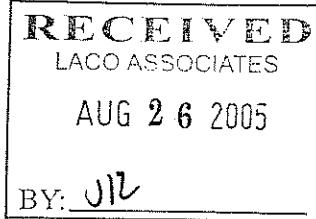
Set 8060

LABORATORY NUMBER:

RElinquished By (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Steve Davis 8/9/05	8-9-05 9:35pm	J. M. Johnson 8/9/05 10:41	

**MATIX**: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; CW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQ[UEOUS] SAMPLES WILL BE RETURNED TO CLIENT



**NORTH COAST  
LABORATORIES LTD.**

August 24, 2005

LACO Associates  
P.O. Box 1023  
Eureka, CA 95502

Attn: Accounts Payable

RE: 3503.03, CRESCENT CITY SHELL

**SAMPLE IDENTIFICATION**

Fraction	Client Sample Description
01A	3503-MW3-W
01D	3503-MW3-W
02A	3503-DW-W
02D	3503-DW-W
03A	3503-OW1-W
03D	3503-OW1-W
04A	3503-OW2-W
04D	3503-OW2-W
05A	3503-QCTB-W

Order No.: 0508276

Invoice No.: 52279

PO No.: TASK 3027

ELAP No. 1247-Expires July 2006

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

LMO \_\_\_\_\_  
 ✓ DRG \_\_\_\_\_  
 DNL \_\_\_\_\_  
 GH \_\_\_\_\_  
 GEO \_\_\_\_\_  
 HPI \_\_\_\_\_  
 CSM \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 File \_\_\_\_\_  
 Project # \_\_\_\_\_

**REPORT CERTIFIED BY**

Colleen Blackstone (GSQ) T. Sher

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.  
Laboratory Director

Date: 24-Aug-05  
WorkOrder: 0508276

## ANALYTICAL REPORT

Client Sample ID: 3503-MW3-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-01A      Matrix: Groundwater

Test Name:	Gasoline Components/Additives					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
c-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	102	80.8-139	% Rec	1.0		8/18/05

Test Name:	TPH as Gasoline					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/18/05

Client Sample ID: 3503-MW3-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-01D      Matrix: Groundwater

Test Name:	TPH as Diesel/Motor Oil					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/17/05
TPHC Motor Oil	ND	170	µg/L	1.0	8/16/05	8/17/05

Date: 24-Aug-05  
WorkOrder: 0508276

## ANALYTICAL REPORT

Client Sample ID: 3503-DW-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-02A      Matrix: Groundwater

Test Name:	Gasoline Components/Additives					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
o-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/18/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified  
Parameter      Result      Limit      Units      DF      Extracted      Analyzed  
TPHC Gasoline      ND      50      µg/L      1.0     

Client Sample ID: 3503-DW-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-02D      Matrix: Groundwater

Test Name:	TPH as Diesel/Motor Oil					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/17/05
TPHC Motor Oil	ND	170	µg/L	1.0	8/16/05	8/17/05

Date: 24-Aug-05  
WorkOrder: 0508276

## ANALYTICAL REPORT

Client Sample ID: 3503-OW1-W  
Lab ID: 0508276-03A Matrix: Groundwater

Received: 8/9/05

Collected: 8/9/05 0:00

Test Name: Gasoline Components/Additives

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
o-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	103	80.8-139	% Rec	1.0		8/18/05

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/18/05

Client Sample ID: 3503-OW1-W

Received: 8/9/05

Collected: 8/9/05 0:00

Lab ID: 0508276-03D Matrix: Groundwater

Test Name: TPH as Diesel/Motor Oil w/ Silica Gel Cleanup Reference: EPA 3510/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/19/05	8/22/05
TPHC Motor Oil	ND	170	µg/L	1.0	8/19/05	8/22/05

Date: 24-Aug-05  
WorkOrder: 0508276

## ANALYTICAL REPORT

Client Sample ID: 3503-OW2-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-04A      Matrix: Groundwater

Test Name:	Gasoline Components/Additives      Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
o-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	102	80.8-139	% Rec	1.0		8/18/05

Test Name:	TPH as Gasoline      Reference: LUFT/EPA 8260B Modified					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/18/05

Client Sample ID: 3503-OW2-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-04D      Matrix: Groundwater

Test Name:	TPH as Diesel/Motor Oil      Reference: EPA 3510/GCFID(LUFT)/EPA 8015B					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/16/05	8/17/05
TPHC Motor Oil	ND	170	µg/L	1.0	8/16/05	8/17/05

Date: 24-Aug-05  
WorkOrder: 0508276

## ANALYTICAL REPORT

Client Sample ID: 3503-QCTB-W      Received: 8/9/05      Collected: 8/9/05 0:00  
Lab ID: 0508276-05A      Matrix: Trip Blank

Test Name:	Gasoline Components/Additives					
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/18/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/18/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/18/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/18/05
Benzene	ND	0.50	µg/L	1.0		8/18/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/18/05
Toluene	ND	0.50	µg/L	1.0		8/18/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/18/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/18/05
o-Xylene	ND	0.50	µg/L	1.0		8/18/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/18/05

Test Name: TPH as Gasoline      Reference: LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/18/05

## North Coast Laboratories, Ltd.

Date: 24-Aug-05

**CLIENT:** LACO Associates  
**Work Order:** 0508276  
**Project:** 3503.03, CRESCENT CITY SHELL

## QC SUMMARY REPORT

Method Blank

Sample ID: <b>MB-8/18/05</b>	Batch ID: R36500	Test Code: 8260OXYW	Units: µg/L					Analysis Date: 8/18/05 8:59:00 AM	Prep Date:		
Client ID:		Run ID: ORGCMS3_050818B		SeqNo:	525337						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
Benzene	ND	0.50									J
Tert-amyl methyl ether (TAME)	ND	1.0									J
Toluene	ND	0.50									J
Ethylbenzene	0.1125	0.50									
m,p-Xylene	0.2370	0.50									
o-Xylene	0.1373	0.50									
1,4-Dichlorobenzene-d4	1.02	0.10	1.00	0	102%	81	139	0			
Sample ID: <b>MB-8/18/05</b>	Batch ID: R36475	Test Code: GASW-MS	Units: µg/L					Analysis Date: 8/18/05 8:59:00 AM	Prep Date:		
Client ID:		Run ID: ORGCMS3_050818A		SeqNo:	525037						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	20.10	50									J
Sample ID: <b>MB-14055</b>	Batch ID: 14055	Test Code: SGTPDMW	Units: µg/L					Analysis Date: 8/22/05 6:26:50 PM	Prep Date: 8/19/05		
Client ID:		Run ID: ORGC5_050822B		SeqNo:	525385						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	ND	50									
TPHC Motor Oil	38.57	170									J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** LACO Associates  
**Work Order:** 0508276  
**Project:** 3503.03, CRESCENT CITY SHELL

## QC SUMMARY REPORT

Method Blank

Sample ID: <b>MB-14034</b>	Batch ID: <b>14034</b>	Test Code: <b>TPHDMW</b>	Units: <b>µg/L</b>	Analysis Date: <b>8/17/05 4:03:14 AM</b>			Prep Date: <b>8/16/05</b>				
Client ID:	Run ID:	<b>ORGCT_050817B</b>			SeqNo:	<b>525396</b>					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	39.84	50									J
TPHC Motor Oil	83.29	170									J

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## North Coast Laboratories, Ltd.

Date: 24-Aug-05

**CLIENT:** LACO Associates  
**Work Order:** 0508276  
**Project:** 3503.03, CRESCENT CITY SHELL

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID:	LCS -05528	Batch ID:	R36500	Test Code:	8260QXYW	Units:	µg/L	Analysis Date: 8/18/05 5:35:00 AM			Prep Date:		
Client ID:		Run ID:		ORGCMSS3_050818B		% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual	
Analyte		Result	Limit	SPK value	SPK Ref Val								
Methyl tert-butyl ether (MTBE)	18.34	1.0	20.0	0	91.7%	80	120	120	0	0	0		
Tert-butyl alcohol (TBA)	372.3	1.0	400	0	93.1%	25	162	162	0	0	0		
Di-isopropyl ether (DIPE)	18.75	1.0	20.0	0	93.8%	80	120	120	0	0	0		
Ethyl tert-butyl ether (ETBE)	18.54	1.0	20.0	0	92.7%	77	120	120	0	0	0		
Benzene	19.10	0.50	20.0	0	95.5%	78	117	117	0	0	0		
Tert-amyl methyl ether (TAME)	18.11	1.0	20.0	0	90.5%	64	136	136	0	0	0		
Toluene	19.44	0.50	20.0	0	97.2%	80	120	120	0	0	0		
Ethylbenzene	18.71	0.50	20.0	0	93.5%	80	120	120	0	0	0		
m,p-Xylene	38.05	0.50	40.0	0	95.1%	80	120	120	0	0	0		
o-Xylene	18.87	0.50	20.0	0	94.3%	80	120	120	0	0	0		
1,4-Dichlorobenzene-d4	1.08	0.10	1.00	0	108%	81	139	139	0	0	0		
Sample ID:	LCSD-05528	Batch ID:	R36500	Test Code:	8260QXYW	Units:	µg/L	Analysis Date: 8/18/05 6:01:00 AM			Prep Date:		
Client ID:		Run ID:		ORGCMSS3_050818B		% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual	
Analyte		Result	Limit	SPK value	SPK Ref Val								
Methyl tert-butyl ether (MTBE)	18.29	1.0	20.0	0	91.5%	80	120	120	18.3	0.269%	20		
Tert-butyl alcohol (TBA)	373.3	1.0	400	0	93.3%	25	162	162	372	0.263%	20		
Di-isopropyl ether (DIPE)	18.85	1.0	20.0	0	94.3%	80	120	120	18.8	0.537%	20		
Ethyl tert-butyl ether (ETBE)	18.56	1.0	20.0	0	92.8%	77	120	120	18.5	0.107%	20		
Benzene	19.49	0.50	20.0	0	97.4%	78	117	117	19.1	2.04%	20		
Tert-amyl methyl ether (TAME)	18.29	1.0	20.0	0	91.4%	64	136	136	18.1	0.975%	20		
Toluene	19.60	0.50	20.0	0	98.0%	80	120	120	19.4	0.821%	20		
Ethylbenzene	19.00	0.50	20.0	0	95.0%	80	120	120	18.7	1.55%	20		
m,p-Xylene	38.85	0.50	40.0	0	97.1%	80	120	120	38.0	2.08%	20		
o-Xylene	19.09	0.50	20.0	0	95.5%	80	120	120	18.9	1.21%	20		
1,4-Dichlorobenzene-d4	1.07	0.10	1.00	0	107%	81	139	139	1.08	1.17%	20		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** LACO Associates  
**Work Order:** 0508276  
**Project:** 3503.03, CRESCENT CITY SHELL

**QC SUMMARY REPORT**  
Laboratory Control Spike

Sample ID:	Batch ID:	Test Code:	Units:	Analysis Date:	Prep Date:						
Client ID:	Run ID:	ORGCMSS_050818A	µg/L	SeqNo:							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	933.8	50	1,000	0	93.4%	80	120	0	0	0	
Sample ID: LCSD-05529	Batch ID: R36475	Test Code: GASW-MS	Units: µg/L	Analysis Date: 8/18/05 7:17:00 AM	Prep Date:						
Client ID:	Run ID:	ORGCMSS_050818A		SeqNo:	525034						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	929.9	50	1,000	0	93.0%	80	120	934	0.426%	20	
Sample ID: LCS-14055	Batch ID: 14055	Test Code: SGTPDMW	Units: µg/L	Analysis Date: 8/22/05 4:22:25 PM	Prep Date: 8/19/05						
Client ID:	Run ID:	ORGCS_050822B		SeqNo:	525383						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	379.1	50	500	0	75.8%	42	96	0	0	0	
TPHC Motor Oil	847.0	170	1,000	0	84.7%	52	103	0	0	0	
Sample ID: LCSD-14055	Batch ID: 14055	Test Code: SGTPDMW	Units: µg/L	Analysis Date: 8/22/05 4:53:01 PM	Prep Date: 8/19/05						
Client ID:	Run ID:	ORGCS_050822B		SeqNo:	525384						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	341.2	50	500	0	68.2%	42	96	379	10.5%	15	
TPHC Motor Oil	774.8	170	1,000	0	77.5%	52	103	847	8.90%	15	
Sample ID: LCS-14034	Batch ID: 14034	Test Code: THDMW	Units: µg/L	Analysis Date: 8/17/05 2:01:20 AM	Prep Date: 8/16/05						
Client ID:	Run ID:	ORGCT_050817B		SeqNo:	525393						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	581.2	50	500	0	116%	72	124	0	0	0	
TPHC Motor Oil	1,299	170	1,000	0	130%	71	139	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**CLIENT:** LACO Associates  
**Work Order:** 0508276  
**Project:** 3503.03, CRESCENT CITY SHELL

**QC SUMMARY REPORT**  
Laboratory Control Spike Duplicate

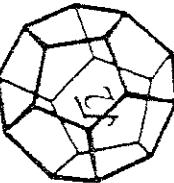
Sample ID: LCSD-14034	Batch ID: 14034	Test Code: TPHIDMW	Units: ug/L	Analysis Date: 8/17/05 2:21:43 AM			Prep Date: 8/16/05				
Client ID:		Run ID: ORGC7_050817B		SeqNo: 525394							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPD Limit	Qual
TPHC Diesel (C12-C22)	576.7	50	500	0	115%	72	124	581	0.781%	15	
TPHC Motor Oil	1,311	170	1,000	0	131%	71	139	1,300	0.886%	15	

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



**NORTH COAST  
LABORATORIES LTD.**

5680 West End Road • Arcata • CA 95521-9202  
707-822-4649 Fax 707-822-6811

# Chain of Custody

090827-6  
LABORATORY NUMBER:

Attention: Accounts Payable	Results & Invoice to: Laco Associates	Address: 21 W. 4th St. Eureka CA 95501	Phone: (707) 443-5054	Copies of Report to: LACO ; CHRISTINE MANHART	Sampler (Sign & Print): SJD/RLD <i>S. J. Davis</i>	PROJECT INFORMATION	Project Number: 3503.03	Project Name: CRESCENT CITY SHELL	Purchase Order Number: task 3027	ANALYSIS	TPHd/mo w/SGC	8260 List 1	CONTAINER PRESERVATIVE	TAT: 1 24 Hr 1 48 Hr 1 5 Day 1 5-7 Day <input checked="" type="checkbox"/> STD (2-3 Wk) 1 Other:
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**AIR TOXICS LTD.**

5282

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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## **Air Toxics Ltd. Introduces the Electronic Report**

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020  
Hours 8:00 A.M to 6:00 P.M. Pacific



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**WORK ORDER #: 0508221**

Work Order Summary

**CLIENT:** Ms. Christine Manhart  
Laco Associates  
21 W. 4th Street  
Eureka, CA 95501      **BILL TO:** Ms. Christine Manhart  
Laco Associates  
21 W. 4th Street  
Eureka, CA 95501

**PHONE:** 707-443-5054      **P.O. #**  
**FAX:** 707-443-0553      **PROJECT #** 5281.01 HPI/CC SHELL  
**DATE RECEIVED:** 08/10/2005      **CONTACT:** Nicole Salengo  
**DATE COMPLETED:** 08/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT</u>
01A	5282-VP1	Mod. Method TO-14A	Tedlar Bag
02A	5282-VP2	Mod. Method TO-14A	Tedlar Bag
02AA	5282-VP2 Duplicate	Mod. Method TO-14A	Tedlar Bag
03A	5282-VP3	Mod. Method TO-14A	Tedlar Bag
04A	5282-VP4	Mod. Method TO-14A	Tedlar Bag
05A	5282-VP5	Mod. Method TO-14A	Tedlar Bag
06A	5282-VP6	Mod. Method TO-14A	Tedlar Bag
07A	Lab Blank	Mod. Method TO-14A	NA
08A	CCV	Mod. Method TO-14A	NA
09A	LCS	Mod. Method TO-14A	NA

CERTIFIED BY:

DATE: 08/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
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**LABORATORY NARRATIVE****Mod. Method TO-14A****Laco Associates****Workorder# 0508221**

Six 1 Liter Tedlar Bag samples were received on August 10, 2005. The laboratory performed the analysis via Modified Method TO-14A using GC/MS in the full scan mode. The method involves direct injection of up to a 40 mL sample aliquot into a vapor management system. Following dehumidification the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits of each compound.

<b>Requirement</b>	<b>TO-14A/TO-15</b>	<b>ATL Modifications</b>
Concentration of IS Spike	10 ppbv (TO-15)	500 ppbv
BFB Acceptance Criteria	CLP protocol (TO-15)	SW-846 protocol
Sampling Drying System	Nafion Dryer (TO-14A)	Multisorbent concentrator
Blank acceptance criteria	< 0.2 ppbv (TO-14A)	< RL.
IS Recovery	TO-15: Within 40 % of mean over ICAL for blanks, and w/in 40 % of daily CCV for samples	Within 40 % of CCV recovery for blank and samples.
Sample volume	Up to 400 mL (TO-14A)	Up to 40 mLs
Initial Calibration	+/- 30 % RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to < 40 %.
Primary Ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106
Daily CCV	+/- 30 % D	</= 30 % D with 2 allowed out up to 40%; flag associated sample results.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
BFB Tune Absolute Abundance Criteria	Within 10% of that from the previous day. (TO-14A)	CCV Internal Standard area counts are compared to the ICAL; corrective action for > 40 %D.
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters.	Syringe dilutions, bag dilutions.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit

UJ- Non-detected compound associated with low bias in the CCV.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

**Client Sample ID: 5282-VP1**

**Lab ID#: 0508221-01A**

No Detections Were Found.

**Client Sample ID: 5282-VP2**

**Lab ID#: 0508221-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	5.0	27	18	98

**Client Sample ID: 5282-VP2 Duplicate**

**Lab ID#: 0508221-02AA**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	5.0	28	18	99

**Client Sample ID: 5282-VP3**

**Lab ID#: 0508221-03A**

No Detections Were Found.

**Client Sample ID: 5282-VP4**

**Lab ID#: 0508221-04A**

No Detections Were Found.

**Client Sample ID: 5282-VP5**

**Lab ID#: 0508221-05A**

No Detections Were Found.

**Client Sample ID: 5282-VP6**

**Lab ID#: 0508221-06A**

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: 5282-VP1

Lab ID#: 0508221-01A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081209	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 01:11 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP2

Lab ID#: 0508221-02A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081210	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 01:33 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	27	18	98

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP2 Duplicate

Lab ID#: 0508221-02AA

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081215	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 03:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	28	18	99

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP3

Lab ID#: 0508221-03A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081211	Date of Collection:	8/9/05
Dil Factor:	1.00	Date of Analysis:	8/12/05 02:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP4

Lab ID#: 0508221-04A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081212	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 02:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP5

Lab ID#: 0508221-05A

## MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081213	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 03:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

# AIR TOXICS LTD.

Client Sample ID: 5282-VP6

Lab ID#: 0508221-06A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081214	Date of Collection:	8/9/05
Dil. Factor:	1.00	Date of Analysis:	8/12/05 03:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
<u>o-Xylene</u>	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508221-07A

## MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081208	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/12/05 11:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508221-08A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081206	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/12/05 10:42 AM

Compound	%Recovery
Benzene	103
Toluene	103
Ethyl Benzene	114
m,p-Xylene	110
o-Xylene	116
Methyl tert-butyl ether	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508221-09A

MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS

File Name:	e081207	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/12/05 11:12 AM

Compound	%Recovery
Benzene	100
Toluene	98
Ethyl Benzene	110
m,p-Xylene	103
<u>o-Xylene</u>	107
Methyl tert-butyl ether	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130

**AIR TOXICS LTD.**

AN ENVIRONMENTAL ASPECT OF THE LARGEST AIR

handling or shipping of these samples. Retailer-like signature also indicates agreement to hold

**CHAIN-OF-CUSTODY RECORD**

Contact Person CHRISTINE MANHART  
Company LACD ASSOCIATES  
Address 21 W. 4TH STREET CITY OF EUREKA  
Phone (707) 443-5054 FAX (707) 443-5054  
Collected By: signatures \_\_\_\_\_  


# **Attachment 5**



Project Name: CRESCEINT CITY SHELL HPV/PPP  
Project No.: 5282\_01  
Task: D13  
Date: 6/16/2005  
PM: CSW

Tech: BWN  
Mobe/Demobe time: 5/25  
Travel time: 1.75 / 1.75  
Time on site: 1130  
Time off site: 1300  
Mileage: 180

#### SYSTEM READINGS

UNIT: C-S PARGER #1

UNIT:

Master Panel Runtime (Hrs): 11484, 87

Master Panel Runtime (Hrs):

O<sub>2</sub> Concentrator Runtime (Hrs): 14399

O<sub>2</sub> Concentrator Runtime (Hrs):

System Clock Time: 12:12 2/12 CORRECT

System Clock Time:

STATION	MANIFOLD PRESSURE (psi)	SPARGE POINT	WELL HEAD PRESSURE (psi)	STATION	MANIFOLD PRESSURE (psi)	SPARGE POINT	WELL HEAD PRESSURE (psi)
1	30			1			
2	39			2			
3	38			3			
4	27			4			
5	31			5			
6	26			6			
7	79			7			
8	26			8			
9	38			9			
10	28			10			
11				11			
12				12			

#### ANCILLARY INFORMATION

Power Meter (Kwh): 24945 Max. Temperature (°F): 92.2

Max. Humidity (%RH): H1 Ventilation Fan(s): ON/OFF

Surge Suppression: ON / OFF Controller Battery Voltage (volts): N/A

#### TROUBLESHOOTING

Ozone Detector Fault: N/A YES / NO 16A Breaker Fault: YES / NO

Panel GFI Fault: YES / NO Main Circuit Breaker Fault: YES / NO

Controller Fault: YES / NO Fasteners/Fittings: ✓

Solenoid Malfunction: ✓ 1 2 3 (4) 5 6 7 8 9 10 11 12 Correct Controller Program: YES / NO

Tubing: ✓ Wires: ✓

#### MAINTENANCE

O<sub>2</sub> Concentrator Filter YES / NO Reset Temperature/Humidity YES / NO

Compressor Filter YES / NO Check Peroxide Level N/A YES / NO

STATION	RUN TIME				SPARGE POINT	WELL BOX OZONE CONC. (ppm)			
	A	B	C	HOURS/DAY					
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
TOTAL:									
START TIMES	A	B	C	REPAIRS					
1				R/R TEFLO TUBING TO B/F VALVE #2 R/R SOLENOID PLUNGER & SPRING # 4					
2									
3									
4									
5									
6									
MODIFICATIONS									
CABINET DOOR NOT INSTALLED; NOTE: COMPRESSOR NEEDS THE CONTROLLED COOLING PROVIDED BY FANS IN ENCLOSURE. OZONE GENERATOR TO COMPRESSOR CONNECTION LEAKING ON ARRIVAL @ 90° FITTING. SHEO FULL OF OZONE ON ARRIVAL.									



Project Name: CRESCENT CITY SHELL HPI/PFP  
 Project No.: 5282.01  
 Task: 413  
 Date: 7-14-05  
 PM: 0200

Tech: SJD  
 Mobe/Demob time: 25/125  
 Travel time: 2.50  
 Time on site: 12:00  
 Time off site: 12:40  
 Mileage: 100

#### ANCILLARY INFORMATION

Power Meter (Kwh): 25635	Max. Temperature (°F): 93.9°
Max. Humidity (%RH): Hi %	Ventilation Fan(s): ON/OFF
Surge Suppression: ON / OFF	

#### SYSTEM READINGS

UNIT: C-SPARGER #1	UNIT:
C-Sparger Runtime (Hrs): 12066.84	C-Sparger Runtime (Hrs):
O <sub>2</sub> Concentrator Runtime (Hrs): 15071	O <sub>2</sub> Concentrator Runtime (Hrs):
System Clock Time: 12:18 @ 12:18 CORRECT	System Clock Time:
LINE PRESSURE (psi)	LINE PRESSURE (psi)
STATION 1: 30	STATION 1:
STATION 2: 36	STATION 2:
STATION 3: 41	STATION 3:
STATION 4: 28	STATION 4:
STATION 5: 29	STATION 5:
STATION 6: 27	STATION 6:
STATION 7: 28	STATION 7:
STATION 8: 26	STATION 8:
STATION 9: 39	STATION 9:
STATION 10: 30	STATION 10:

#### TROUBLESHOOTING

Ozone Detector Fault: N/A	YES / NO	16A Breaker Fault: YES / NO
Panel GFI Fault:	YES / NO	Main Circuit Breaker Fault: YES / NO
Controller Fault: YES / NO		Fasteners: ✓
SOLENOID MALFUNCTION 1 2 3 4 5 6 7 8 9 10		Wires: ✓ CORRECT CONTROL PROGRAM YES / NO
Tubing: ✓		

#### MAINTENANCE

O <sub>2</sub> Concentrator Filter	YES / NO	Reset Temperature/Humidity	YES / NO
Compressor Filter	YES / NO	Check Peroxide Level	N/A YES / NO



21 W. 4th Street  
Eureka, California 95502  
707-443-5054

PROJECT CREScent CITY STELL

BY BWN

SHEET NO.

LOCATION

DATE 7/4/05

1/1

CLIENT

CHECKED

JOB NO.

DATE

5282.01

Steve,

Could you please record information

on Oxygen Concentrator including

Model : AS-12

(on Plaque)

UNIT SERIAL #: 42504-1

Compressor Model #: 2660CE32-190

(on compressor)

DT/SR #: 1202 00033724

MOTOR No. : 608970D

SEE BACK FOR SAMPLE

OXYGEN CONCENTRATOR # 2 INFO  
(From 4th page)

Model: AS-12

Unit Serial #: 41576-5

Compressor Model #: 2660CE32-190

DT/SR : 87020000442

Motor No. : 608970D